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Editor's Pick. A guide to Computerworld's coverage of Web services and service-oriented architectures, including applications, security and predictions.

QuickLink #e4329

Web Services Glossary. Get familiar with Web services

terms, courtesy of the World Wide Web Consortium.

QuickLink #e4850

Inside Enterprise. Explanations of what Web services are and when to use them, from Web Services Explained, at QuickLink #e4379, and Web Services: A Manager's

Guide, at QuickLink #e4860.

Accessible Networks Are Key.

Opinion: Richard Stevens of Capient sees great promise in Web services, but not until the public UDDI network becomes operational. [QuickLink #e4347](#)

AT DEADLINE

Google Begins Stock Auction

Google Inc. opened the auction for its much-anticipated initial public offering on Friday, with the pricing of its stock this week. Google has estimated that its shares will be priced between \$105 and \$135 each. The start of the auction came a week after the company revealed that it may have violated U.S. securities laws by issuing unregistered shares to employees and consultants. The company has offered to buy back the shares in question in the hope of rectifying the matter.

Petition Filed Against E-Voting System

Eight Maryland voters last week asked an appeals court to force the Maryland State Board of Elections (SBOE) to address alleged security risks in an electronic voting machine system and provide a voter-verified paper trail during elections. The voters filed motions to force the SBOE to fix alleged problems with an e-voting system sold to the state by Diebold Inc.

AOL, Yahoo Step Up Antispam Efforts

America Online Inc. and Yahoo Inc. plan to use technology to verify the source of e-mail messages as a means of fighting spam. In September, AOL will verify the source of incoming e-mail using a component of Microsoft Corp.'s Sender ID architecture. Yahoo will use its Domain Keys authentication technology to sign all e-mail coming from its mail servers by year's end.

Short Takes

DELL INC. posted second-quarter revenue of \$17.1 billion, 20% higher than in the same quarter a year ago. . . . Eric Baumhauer will resign as chairman of PALM SOURCE INC. on Oct. 28. Palm-Source said he is expected to continue in his role as chairman of sister company PALMONE INC.

HP World Opens as Key Exec Heads Roll

Faltering financial results trigger three dismissals

BY PATRICK THIBODEAU

A S HP WORLD opens in Chicago this week, the buzz among the expected 7,000 attendees will not do about the disappointing financial results that sent some top Hewlett-Packard Co. executives packing.

A key problem for HP is the principal focus of many attending the conference: enterprise hardware. Enterprise storage and server revenue fell 5% to \$3.3 billion, while overall revenue for the company grew 9% to \$18.9 billion.

In particular, HP's Alpha server line was down 32%, and NonStop servers fell 25%. There was also a 23% decline in storage systems revenue.

Bill Moran, an analyst at D.H. Brown & Associates Inc. in Port Chester, N.Y., said the decline in Alpha revenue likely reflects failing customer interest in a system that HP will stop producing in 2006 but will continue to support until 2011. The NonStop decline may indicate that customers are waiting for HP to complete its transition from the MIPS processor to Itanium, said Moran.

Management Shuffle

HP CEO Carly Fiorina fired Peter Blackmore, executive vice president of HP's Customer Solutions Group. He was replaced by Mike Winkler, who had been with Compaq, Jim Milton, CSG senior vice president and managing director of the Americas region, and Kasper Korstend, CSG senior vice president and managing director for Europe, the Middle East and Africa. We were also dismissed.

The management shuffle "deflects criticism," away from Fiorina, said Moran. "She has bought herself some time," he added. Fiorina isn't scheduled to speak at HP World.

Product announcements show the slide include detailed virtualization capabilities in the Itanium-based Integrity server line. A new version of Global Workload Manager will now be able to handle Linux as well as HP-UX, and manage hundreds of servers and partitions. It's now limited to 20 partitions.

HP is also introducing sub-CPU partitioning on the Integrity line, which will allow users to divide the CPU up to

20 ways and run HP-UX and Linux on the partitions.

There are currently two versions of HP-UX: one for the Alpha-based HP 9000, and the other for Integrity. But in October, HP will deliver a unified version. "This is in response to customer demand," said Don Jenkins, vice president of marketing for HP's business-critical servers. "Many customers want to manage one release, patch update, etc., across their environments."

HP will also announce Alpha chip improvements that will boost performance by 10%, officials said. But it is still encouraging users to move to Itanium.

Seattle-based Boeing Employees Credit Union recently



deflected criticism away from Fiorina, says

moved from Alpha servers to the Integrity line. Scott Wolfe, BECU's IT enterprise architect, said that because of increasing batch processing demands, the company had to either upgrade its Alpha servers or move to an alternative.

An Alpha upgrade "was a perfectly viable option," and something the company debated until the end, said Wolfe. "I don't second-guess anyone who wants to continue with Alpha," he said. But since BECU planned to move to Itanium at some point anyway, now was better than later, he said.

The upgrade to faster processors allowed BECU to reduce the number of processors needed from 6 to 8. That boosted performance and, because of per-processor licensing, cut the cost of its Oracle Corp. software in half, said Wolfe. **CP 48853**

EVENT PLANNING

Hewlett-Packard details plans for its unified technology conference

QuickLink 48769
www.computerworld.com

HP Puts Part of the Blame on SAP Migration

Hewlett-Packard sold last week that part of the blame for the revenue shortfall in its enterprise servers and storage group rested on a problematic migration to an SAP A6 order-processing and supply chain system.

HP CEO Carly Fiorina said the problems cost the group about \$400 million in revenue and \$275 million in operating profits.

"We executed poorly on the migration," Fiorina said. While the problems primarily hit HP's industry-standard server business, they also affected the business-critical and storage businesses.

Although the company worked to ensure product availability, HP still lost sales and was forced to fulfill direct orders through channel partners and expedite other orders via air shipments. Those moves cut into the company's gross margins.

HP is a close partner with

SAP and offers specialized consulting services around SAP's supply chain and ERP software. HP has a "strong and productive relationship" with SAP, first as a customer and as a strategic partner, said SAP Americas Inc. spokesman William Wehr. The relationship continues to expand even today, as teams talk about deepening that customer relationship.

"We can talk specifically about what's happening inside HP," Wehr added. But he noted that in HP's statements, no blame for the problems has been placed on SAP's software.

HP is a highly decentralized company whose various divisions make their own decisions around implementing software and order management processes, noted David Dobrin, an analyst at EDS Analysts Inc. in Cambridge, Mass. After its previous implementations, it would seem

that HP should have known how such rollouts can create problems even before it affects sales and prepared it-tail accordingly.

"Even if HP doesn't have the institutional memory, you would think that SAP would," he added.

However, it's surprising that "good software could take a company down like this," Greenbaum added. "It doesn't get more embarrassing than that."

Mark L. Sengv

N.H. Agency to Revamp Criminal Offender Systems

Move follows years of struggle to overcome glitches

BY MARC L. BONHOMI

The New Hampshire Department of Corrections (DOC) hopes to retire a legacy criminal offender field management system with a long history of troubles as part of an effort to rectify shortcomings in the agency's IT infrastructure.

The original system, designed to help with the case management of criminal offenders on probation or parole, was to have been built by Computer Associates International Inc.

The custom application was also supposed to handle financial transactions, including the payment of fines to the state

and of restitution money to victims. But after working on the system for more than two years and spending \$240,000, the state had little to show for its efforts (QuickLink 280/02). The DOC and CA severed all ties in August 2002. As part of a negotiated settlement, CA refunded the money that the DOC had paid, according to Ron Cormier, a project manager at the agency.

Makeshift System

After the effort failed, in-house staffers tinkered with the existing parole and probation management system, creating a stripped-down version of the application to handle restitution and fine payments.

By writing code around a "very old and outdated" Informix database, the DOC was

able to put together a system that allows it to issue restitution checks to victims every 30 days — down from the original 90-day processing cycle, Cormier said.

While that system now handles restitution accounts adequately, it lacks the case management features the agency needed when it hired CA, said state Rep. David Welch, chairman of the Criminal Justice Committee that has oversight of the DOC.

"It's a basic system that doesn't fulfill our needs," he said. The system that was envisioned would have let police or field correction officers easily access the full records of probationers caught committing crimes.

As a result, the DOC plans to retire its two Unix-based of-



CORRECTIONS FACILITY: This one in Berlin will be getting a new criminal offender field management system.

ender management systems and replace them with a single application running on a Microsoft Corp. SQL Server database. The agency issued a request for proposals earlier this year and is awaiting approval from the governor's office before moving forward with its plans.

The DOC wants a Web-based system that will support the payment of fines and parole management, as well as the prison facility and management processes associated

with handling New Hampshire's 2,500 inmates and 2,000 offenders who are on parole or probation.

Cormier said the system will be written to Microsoft .Net programming specifications and allow prison facilities and field service officers, for example, to share data.

"When an offender comes into the system, his entire stay would be tracked through until he's on parole, including the financial processes," said Cormier.

Lesson Learned

Tight IT Security in Place at Athens Games

Strategy keys in on attack prevention and containment

BY JAJKUMAR VIJAYAN

The Olympics got under way in Athens last week amid some of the tightest security in the history of the Games — not just on the physical side, but on the IT side as well.

Fears of a cyberattack on the networks and systems that support the event have prompted the Olympic Games' technology integrator, Atos Origin in France, to implement a multilayered defense focused both on attack prevention and containment.

At its core is a segmentation strategy under which the main network has been carved up into multiple virtual networks, said Jean Chevallier, vice president of Atos Origin's Olympic Games program.

Each of the Olympic venues sits on its own LAN segment.

Networks serving TV broadcasters and print reporters, for instance, are isolated from the ones serving athletes and the Olympic committee. Users on one network don't have access to another network.

"The idea is containment," Chevallier said. "If we have a problem on one network, we can contain that issue to that network."

All of the 10,500 PCs, 900 servers, 2,500 terminals and 4,000 printers that are connected to the Olympic net-

work have been assigned unique identifiers that also tie them to specific locations on the network.

A machine that's disconnected from its assigned network location will not be permitted access again without administrator intervention; the port is shut down to prevent unauthorized systems from logging on. Each of the machines has also been locked down into one of 218 hardware and software configurations.

The precautions are needed because many of the machines are accessible in public areas in the Olympic venues, said Chevallier.

Software from Computer Associates International Inc. will monitor the networks for intrusions and other security breaches. Months have been spent scripting filters to ensure that only significant security events reach administrators, Chevallier said.

Each core system has its



own backup, and the main data center is mirrored at a remote location 200 miles outside Athens to ensure high availability and disaster recoverability, Chevallier said.

For the past two months, the networks and systems have also been subjected to a series of simulated worm and virus attacks, malicious hacks and network failures. "In fact, about 80% of our time has been spent testing this out," Chevallier said.

During the Games, a team of 400 IT professionals will monitor systems in 61 Olympics-related venues from a central technology operation center located in the main Olympics complex in Athens. An additional 3,000 IT volunteers will provide support. **© 48015**

MORE ONLINE

The U.S. Olympic team powers up with Oracle. www.computerworld.com
QuickLink 487/91

Although details about the upgrade are still confidential pending the governor's approval, the DOC hopes to launch the implementation this October and wrap up the project by April 2006.

Cormier doesn't know how much it cost the state to create the restitution database now in place, but he said the DOC has learned from its overall experience with the data warehouse project.

"We wanted the initial system to be built from the ground up, and in the requirements phase of the project, [DOC officials] asked for a lot instead of ensuring they got minimal functionality and building onto that," said Cormier. Ultimately, he said, "we learned we needed to ask for a basic system, then build off that."

Because of the negotiated settlement between the DOC and CA, Cormier couldn't elaborate on why the project went on. CA officials weren't available for comment. **© 487/92**



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Certification Rarely Required As Linux Job Market Grows

Experience often more highly valued than book learning in potential hires

BY TODD R. WEISS

EMPLOYERS appear to be looking for more workers with Linux IT skills, but they're not necessarily seeking those with Linux certification, according to statistics from online IT job board Dice.com.

Of the approximately 49,000 IT job notices listed on Dice.com in the past few weeks, about 2,200 wanted applicants with Linux experience, said Scot Melland, CEO and president of the New York-based company.

"That's up 190% from a year ago. It qualifies as a hot skill set that's really growing in demand," he added.

More than half of the Linux-related jobs being advertised are developer or programming positions, and about a third are located in California.

Practical Knowledge

Perhaps more importantly for job seekers with Linux skills, employers don't usually require that they be certified in Linux. Melland said, "Linux certification has not taken off" as a must-have skill for employees looking over candidates, he said. "I really don't know if it will."

Instead, employers seem to prefer real-world knowledge. "The mantra for the past 12 or 24 months has been experience," Melland said.

While the most popular Linux certification mentioned in Dice.com's job listings is for Red Hat Certified Engineers, only 10 of the 2,000 Linux job listings referred to the certification, he said. "I would say pretty much that that's pretty low," Melland said.

Chris Hjelm, chief technology officer at Chicago-based

online travel service Orbitz LLC, said that "a candidate's ability to learn, solve complex problems, apply their experience and possess solid interpersonal skills and team fit are more relevant" than certifications.

"There is an extensive technical interview process, and the depth of Linux screening varies, depending on the position," Hjelm said. "It works well, given that I haven't seen a recent hire leave due to not having the requisite technical skills."

Joe Poole, technical support manager at Boscov's Department Store LLC in Reading,

In Demand

Pa., said that when his company hires IT staffers, Linux certification may help get an applicant into an interview more quickly, but it's not mandatory.

The department store chain is a big Linux user in its operations, from its stores to its mainframe and servers in its

data center.

"The reason Linux certification isn't a must, he said, is that "if you're hiring from the outside, you really don't know [if applicants are qualified], even if they're certified."

Getting a Grilling

"Book learning and practical experience are two different things," Poole said. "To find out more about an applicant's training during an interview, Poole said he will have the potential new hire talk to IT technicians inside the company so that they can gauge the applicant's actual experience. You can see whether that generates nods of approval or blank stares," he said.

Brian Dewey, a network engineer at Livermore, N.Y.-

Antiphishing Tool Adopted by eBay Now Available to the General Public

BY JAIKUMAR VIJAYAN

EBay Inc.'s popularity clearly has a downside. The company has become a prime target for "phishing" attacks by online perpetrators who e-mail unsuspecting users and set up Web sites in the guise of the popular online auctioneer.

One of the weapons eBay is using to fight back is a product from WholeSecurity Inc., called Web Caller-ID, which allows users to verify the authenticity of a Web site. This week, Austin-based WholeSecurity is making Web Caller-ID generally available to other users as well.

The browser-based software has been embedded in the Account Guard feature of the eBay toolbar since January. It not only detects fake sites in real time but also prevents users from accessing them. "No technology is going to

solve 100% of the phishing problem," said Howard Schmidt, eBay's chief information security officer and a former White House cybersecurity adviser. "But this has provided an additional layer of protection for users."

The product uses a unique behavior-based detection method to identify spoofed Web sites, said Scott Olsen, a senior vice president at WholeSecurity.

Unlike products that work by blacklisting sites that are already known to be fraudulent, Web Caller-ID evaluates every site the user accesses for suspicious behavior.

Olsen said, "Pages are analyzed and scored using a proprietary rating system that

determines whether a page is valid or spoofed.

Users are alerted and blocked when they attempt to launch such pages or enter confidential information into them, Olsen said. WholeSecurity declined to release pricing information.

The technology is effective at detecting new and unreported spoof sites that are often used in phishing scams, said Aviab Litan, an analyst at Stamford, Conn.-based Gartner Inc. "It's a big jump over blacklisted technology," she said.

But there are caveats.

To be protected, users need to download plug-ins that are integrated into browsers or tool bars. Currently, only

based Raymour & Flanigan Furniture, which uses Linux in its operations and data center, agreed, saying his company doesn't require certification in Linux or any other operating system for any IT hires.

Instead of requiring certification, applicants are grilled with technical questions in an effort to trim them up and separate the qualified candidates from the rest, he said.

Jonathan Euseice, an analyst at Illuminata Inc. in Nashua, N.H., said that while employers want to hire only qualified workers, certification isn't typically a prerequisite because it doesn't always guarantee that the applicant has the necessary skills. "It's a nice proxy," he said. "It does give people an additional feeling of confidence" when hiring. **© 48818**

MORE ONLINE

For additional news and information, visit our Linux special coverage page.

QuickLink www.computerworld.com

very large sites, like those of eBay and Yahoo! Inc., have such tool bars, Litan said. Users would also need to download multiple tool bars as more companies start using the technology, she said.

WholeSecurity's technology is being released at a time when phishing attacks, which use spoofed e-mail and Web sites to fool users into divulging personal information, are rising.

The Anti-Phishing Working Group reported 1,422 unique phishing attacks in June, up 19% over May. For the 12-month period that ended in April, phishing attacks cost victims \$1.2 billion, with U.S. companies bearing most of the costs, Gartner said.

The trend has resulted in a "growing sense of urgency" to implement steps to combat the problem, according to Gartner.

Other vendors offering anti-phishing tools include Cyota Inc. in New York and MarkMonitor Inc. in Boise, Idaho. **© 48819**

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IBM Tells Internal Users Not To Install Windows XP Update

Cites compatibility problems with SP2

BY JONIS EVERIS

DEVELOPERS at Microsoft Corp. may be celebrating that they finished work on Service Pack 2 for Windows XP [QuickLink 48694], but IT departments around the world now face the question of whether they should update their systems.

IBM, for one, is holding off on installing the security-focused update for Windows XP. In a note headlined "To patch — or not to patch," posted Aug. 6 on its corporate intranet, IBM told employees not to download SP2 when it becomes available because of compatibility issues. A copy of

the note was obtained by IDG News Service.

"While this patch may be good news for other Microsoft Windows XP owners, IBM is directing XP users not to install SP2," the note states. With close to 400,000 desktops, IBM is a very large Microsoft customer.

"IBM's large number of Web applications will need to be tested and some modified to work correctly with SP2. Currently, some high-profile, business-critical applications are also known to conflict with SP2," IBM said in the note. "When the current issues and concerns have been addressed, IBM will deploy a

customized version of SP2."

An IBM spokeswoman declined to comment on internal IT issues.

A Microsoft spokesman said the company believes IBM's recommendation to its employees is prudent.

"Microsoft would expect any well-run IT organization to make the same recommendation," he said. The company has "recommended all along that customers thoroughly test SP2 before deploying it" to ensure compatibility and avoid unforeseen problems, he said.

IBM alerted its users on the same day Microsoft announced the release to manufacturers of the service pack. The Windows XP update will be available soon through

downloads, retail distribution and free CDs, as well as on new PCs. A network installation package will be available for enterprise users.

SP2 for Windows XP is more than the usual package of bug fixes and patches.

Microsoft has made a trade-off, focusing on security at the expense of compatibility. As a result, SP2 can render existing applications inoperable.

Broad Changes

IBM isn't the only company showing evidence of compatibility problems with XP SP2; Microsoft's own software is also affected. The vendor recently released an update for Microsoft CRM 1.2 because SP2 will prevent the original application from running correctly.

Because of Microsoft's broad changes, analysts have compared the XP service pack to a Windows upgrade rather than a simple update. Business users typically take much longer to install a new version of Windows than a service pack because of compatibility testing.

Thomas Smith, manager of desktop engineering at large Houston-based company that he asked not be identified, said he hopes to equip his 5,000 desktops with a customized version of the service pack before Microsoft pushes it out on Windows Update.

Many of the desktops

Smith manages are scattered throughout North America and use common high-speed Internet connections such as DSL or cable.

Although the company uses a remote management tool supplied by Altiris Inc., Smith said he relies on Windows Update for patching. If the standard Windows XP SP2 distribution is applied to his machines, it will block access to several corporate Web applications, he said.

Microsoft will help users in Smith's position, said Barry Goffe, a group manager in Mi-

“Microsoft would expect any well-run IT organization to make the same recommendation. [We've] recommended all along that customers thoroughly test SP2 before deploying it.

—A MICROSOFT SPOKESMAN

crosoft's Windows group. The software maker plans to offer simple ways to set a unique registry key on XP desktops that will instruct the systems to skip SP2 but still download other critical updates through Windows Update and Automatic Update, Goffe said. "We want to give customers some breathing room," he said.

Nevertheless, Microsoft is urging all users to install SP2 as soon as they can, Goffe said. "This is not about fun and games," he said. "SP2 is about improving the security of our customers' infrastructure. We have spent a lot of time making sure that this delivers a lot of value to all our customers. We're urging all customers to deploy SP2 as soon as possible."

Business users obviously need to test, but Microsoft can't be blamed if users are now unpleasantly surprised by SP2, said Michael Cherry, an analyst at Directions on Microsoft Inc. in Kirkland, Wash.

"Microsoft has been more than forthcoming about the number of changes to this service pack and making it available for testing," Cherry said. "I would say to IT departments that they want to get their testing done quickly because there are significant improvements in this service pack, and I am not sure you would want to force those."

© 2004

Evers writes for the IDG News Service. Computerworld's Todd R. Weiss contributed to this story.



After: Women in a white lab coat work on a laptop computer.

U.S. Sends Health Data Devices to Afghanistan

The U.S. Department of Health and Human Services is distributing thousands of computer-based talking books in Afghanistan as part of a \$1.5 million program designed to provide basic health information to Afghans who can't read or write.

The agency worked with LeapFrog Enterprises Inc. in Emeryville, Calif., to develop the 42-page interactive health care manuals, which use point-and-touch technology and support Afghanistan's two major languages, Dari and Pashto. LeapFrog adapted devices used to teach children in the U.S.

HHS Secretary Tommy Thompson has visited Afghanistan three times since 2001 to evaluate the health care needs of the country's residents. In a statement, he noted

—Bob Brown

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BRIEFS**Seagate Says Rival Can't Get Ex-worker**

Hard drive maker Seagate Technology LLC is seeking a court injunction to prevent a former employee, Pete Goglio, from working for Western Digital Corp., saying Goglio knew too much about Seagate's hard drive reading and writing technology. Goglio, who worked at Seagate for 17 years, was most recently executive director of its recording-head division.

FTC Settles With Pop-up Spammer

San Diego-based D Squared Solutions LLC, which allegedly sent a barrage of pop-up ads to sell pop-up blocking software, is banned from employing that tactic in the future under a settlement announced last week by the Federal Trade Commission. D Squared allegedly used Windows Messenger Service to send pop-ups that appeared as frequently as every 10 minutes, according to the FTC.

McAfee Updates E-Business Server

McAfee Inc. last week released a new version of its E-Business Server data encryption software that it said will make it easier for companies to encrypt data sent outside their networks. E-Business Server 8.0, available now, will also allow large companies to remotely manage multiple E-Business deployments from a single interface, McAfee officials said.

Nortel Restatement Due on Thursday

Nortel Networks Ltd. will provide preliminary, unaudited results for the first two quarters of 2004 on Aug. 10, the company said last week. Nortel is under investigation by the Ontario Securities Commission and the U.S. Securities and Exchange Commission regarding the restatement of its financial results as far back as 2001.

HUD Again Awards EDS \$750M Services Contract

Lockheed Martin had filed a complaint over the original \$860M bid last year

BY TODD R. WEISS

FOR THE SECOND TIME in a year, the U.S. Department of Housing and Urban Development has awarded a disputed IT services contract worth more than \$750 million to Electronic Data Systems Corp., instead of to the vendor that previously provided the services.

HUD again awarded the contract to EDS on Aug. 6, after a seven-month review that began after the current IT services vendor, Lockheed Martin Simulation, Training, and Support (LMSTS), filed a protest last year against the contract award. In its complaint, LMSTS alleged that the government agency misvalued the business proposals from the two companies and "made an irrational source-selection decision."

An audit by the Government Accountability Office in response to the complaint agreed and determined that HUD's decision to award the contract to EDS was unreasonable and should be voided (QuickLink 43933). The contract was originally valued at about \$860 million.

After a new review, however, the agency again awarded the bid to EDS. Information Technology Systems (HTS) com-

tract to Plano, Texas-based EDS. Under the deal, EDS will provide the staff, hardware, software, telecommunications, facilities and services needed to deliver HUD's basic IT functions to about 18,000 workers in more than 80 offices nationwide.

The contract has a base period of four months plus nine option years, with a total potential value of \$750 million. Nettie R. Johnson, a spokeswoman for LMSTS, said in a statement that the latest HUD decision is "even more surprising than its first award" of

the contract. "While we are disappointed at this outcome, we have requested a debrief and look forward to learning how HUD made its selection of EDS for the critically important 10-year HITS program. We will not have any further comment on this matter until we receive our debriefing from HUD," she said.

HUD spokesman Jerome Brown said he had no further comment. "I can't go into specifics," Brown said.

Jim Duffey, vice president of global sales at EDS, said that despite the delays, the company is eager to get back to work on the HUD IT project. "It has been a long and arduous process, but the new award by HUD reaffirms that EDS offered the superior solution — twice," he said.

The IT services will include enterprise-wide data processing and management from mainframe to the desktop, information security, technology refresh services, help desk support, user support, disaster recovery, printing and distribution, networking services, wireless services, TV/video-conferencing and Web administration. □ 48772

HUD Contract Timeline

AUGUST 2003

- EDS wins original contract.
- Lockheed files formal protest to EDS.

JANUARY 2004

- HUD voids contract.
- EDS is awarded by BAQ.

AUGUST 2004

- HUD again awards contract to EDS.

Zurich Financial Outsources App Development to CSC

BY LUCAS MEARIAN

Zurich Financial Services, one of the world's largest insurers, has signed a seven-year, \$1.3 billion outsourcing agreement with Computer Sciences Corp. to hand off new application development and the management of more than 4,000 existing applications.

ZFS's server infrastructure will continue to be managed in-house, but the deal, signed late last month, will transfer about 1,600 of the Zurich-based company's 5,000 IT employees to El Segundo, Calif.-based CSC. About 650 of the employees being transferred are U.S.-based, ZFS said.

U.S. employees and personnel in the U.K. and Switzerland are expected to transfer

to CSC in the fourth quarter, and employees in Germany are expected to make the transition during the second half of 2005.

Expected Benefits

"We're getting a very, very flexible framework, where we can redeploy our staff and resources almost to any needs we want," said Michael Paravincini, ZFS's chief information technology officer. "Secondly, it's about productivity. It's about leveraging the expertise CSC has, making sure we can streamline our applications landscape and reduce the number of platforms and systems in it."

Paravincini said ZFS expects to reduce costs by about 20%

by employing CSC. "We [expect] to get to a very reasonable benefit early on in the contract, which is very important to me," he said.

ZFS's global organization has traditionally been a geographically oriented operation, in which each region runs its own unique business applications, Paravincini said. Last year, in a move to standardize operations and cut costs, the company finished consolidating its physical infrastructure into two data centers, one for European and Asia-Pacific operations and one for U.S. operations.

About 85% of ZFS's applications are hometown, according to Paravincini, who said the company will likely choose to standardize on some of its existing platforms instead of de-

veloping or buying new ones. Bill Bradway, an analyst at Framingham, Mass.-based Financial Insights, said the insurance industry as a whole is five to seven years behind banking and brokerage firms in consolidating IT infrastructures and standardizing platforms. Paravincini agreed with that assessment.

Paul DeCaria, chief technology officer for CSC's Financial Services Group, said his company will primarily on ZFS's broad-based applications of insurance underwriting and claims.

"Certainly, they have an incredibly large insurance portfolio with millions of policies," DeCaria said. "Policy administration, just by the sheer weight of it, is important." □ 48780

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Novell Bundles JBoss App Server

Red Hat launches app server as well

BY CAROL SLIWA

NOVELL INC. earlier this month bundled the open-source, J2EE-compliant JBoss Application Server with its SUSE Linux Enterprise Server 9, giving application developers a built-in deployment option.

Novell's SUSE Linux [JBoss offering] includes a software development kit with documentation and tools that aim to make developers more productive. Technical support is being provided by Novell with backing from Atlanta-based JBoss Inc., which announced last month that its open-source application server passed Sun Microsystems Inc.'s compatibility test suite for Java 2 Enterprise Edition 4.

[JBoss CEO Marc Fleury said] Java virtual machine (JVM) performance had been hampered on Linux due to limitations with the kernel threading model. But Novell's SUSE

Enterprise Server 9 supports the 2.6 Linux kernel patches that fix the threading model, he said.

"That will lead to better performance and scalability for Java virtual machines, so now Linux can be a very serious enterprise-level choice when it comes to deployment platforms," Fleury said. "Novell is doing the right things to make SUSE Linux the best Linux platform to run Java. I certainly hope to see Red Hat step up with a 2.6 enterprise shipment of Linux."

Red Hat Inc. has incorporated some of the 2.6 kernel features into its current Red Hat Enterprise Linux 3 release. Version 4, due early next year, will be built around the new kernel, Red Hat spokeswoman Leigh Day said.

At the recent LinuxWorld Conference in San Francisco, Novell also announced that the next major release of its ext3Nd application suite, due in late 2005, will be bundled with JBoss Application Server 4.x rather than the ext3Nd Application Server it acquired in

2002 from SilverStream Software Inc.

JBoss User Profile



2002 from SilverStream Software Inc.

A maintenance release of ext3Nd will support the JBoss application server by year's end, according to Ashish Larive, a director of product marketing at Novell.

Continued Support

Even though Novell will no longer ship new releases of its application server, it pledged to continue support for the product, as well as for IBM's WebSphere, BEA Systems Inc.'s WebLogic and Jakarta Tomcat.

"We have been looking at supporting open-source proj-

ects and products wherever it makes sense within our product portfolio, and an application server is pretty much a commoditized part of the platform," Larive said. "We first investigated trying to open-source our application server, but because of licensing restrictions, we were unable to do so. The next option was to look at the most popular open-source application server, and JBoss was the clear choice."

Novell plans to provide a series of white papers and technical guides to help customers, but the company expects migration issues to be minor since JBoss is J2EE-compliant.

"This is a good thing for both Novell and JBoss," said Anne Thomas Manes, an analyst at Midvale, Utah-based Burton Group. "It's a waste of time, effort and money for Novell to continue to invest in this commodity J2EE application server technology when there are freely available, high-quality app servers that they can embed for their product instead."

Also at LinuxWorld, Red

Hat announced the availability of its lightweight application server, which is based on the open-source JBoss application server from the ObjectWeb Consortium, Raleigh, N.C.-based Red Hat said. It plans to test the application server to ensure that it is compatible with JBoss platforms from BEA, IBM and Oracle Corp.

Red Hat Application Server is tested and supported on all major commercial JVMs, including those from BEA, IBM and Sun, according to the company. Plans also call for it to be tested and certified with leading database management systems, including those from Oracle, IBM and Sybase Inc.

Tom Murphy, an analyst at Meta Group Inc., predicted "a flurry of activity" around open-source application servers such as Red Hat, Novell's releases and others.

"Just like it took the formation of Red Hat to really get Linux going and then the backing of IBM to make corporations comfortable, we are seeing a similar era now for open-source middleware," he said. **© 48796**

Reporter Todd R. Weiss contributed to this story.

Oracle Gives CRM Another Shot

BY MARC L. SONGIORNO

Oracle Corp. is counting on the latest revision of its E-Business Suite, aimed largely at improving sales processes, to finally give it the elusive traction it has sought in the CRM market for years.

The company today is expected to announce Oracle CRM 11.1.0, an upgrade that includes a revamp of its sales, marketing and partner relationship management modules. The new CRM application is part of an ongoing E-Business Suite upgrade that earlier this month yielded Version 11.1.0 of its Supply Chain Management application.

Timed for release as corporations are expected to be willing to once again invest in customer-facing applications,

CRM 11.1.0 is designed to enable the alignment of sales activities with company goals, boost the effectiveness of individual salespeople and better collaboration between in-house and indirect sales forces, said John Wookley, Oracle's senior vice president of applications development.

Among the new tools in CRM 11.1.0 is the Oracle Analytical Workbench, which can access data from the Oracle sales and marketing modules and present them in a single screen to help managers identify the best customers to target for upselling or cross-selling.

In addition, managers can now craft compensation packages that reward salespeople who fulfill corporate objectives.

According to Wookley, analytical technology will enable managers to track sales by product or other categories and create a "holistic view" of companywide CRM activities. Users can access sales status information, do historical and predictive analyses, and report on potential deals, Oracle said.

Making Inroads

The cross-selling, analytical and marketing integration enhancements are of particular interest to Affina, a customer service company in Peoria, Ill. Victor Burgess, vice president and general manager of alliances, said the company will be able to offer the upselling and cross-selling technology to its customers as part of its contact center service. Affina

currently runs Oracle's E-Business Suite 11.9 CRM and application server software.

The CRM 11.1.0 release is the latest of several attempts by Oracle to gain share in the CRM market — an effort that so far has yielded few results, said Erin Kinikin, an analyst at Forrester Research Inc.

By building in features that help salespeople save time and make more money, the suite might be appealing enough to ease their historical aversion to CRM software, Kinikin said. However, she noted, "we need to see some customer references and return-on-investment results."

All Oracle CRM 11.1.0 modules will be available within the next eight weeks. Pricing per module starts at \$3,995 per user, subject to conditions in Oracle's E-Business Suite pricing schedule. **© 48800**

NEW PRODUCT

New Mexico County Pioneers Courthouse Wi-Fi Service

BY BOB BREWIN

Bernalillo County, N.M., has adopted Wi-Fi technology to support Internet access for judges, lawyers and jurors in its courthouses. The service also provides wireless voice-over-IP phone service for security personnel.

Jim McMillan, principal court technology consultant at the National Center for State Courts in Williamsburg, Va., called Bernalillo county a pioneer in the use of Wi-Fi service and Wi-Fi VoIP phones in courts. McMillan said the Bernalillo courthouse is one of the first in the country to offer free Wi-Fi service to jurors.

Paul Roybal, CIO of the Metropolitan Court in Bernalillo county, which encompasses greater Albuquerque, said the court this month kicked off the second phase of a \$150,000 Wi-Fi deployment that began in February. It will provide both Wi-Fi VoIP and data services throughout the 10-story courthouse. The Wi-Fi network is intended to reduce juror frustration with waiting to be called for cases, Roybal noted.

The network hardware includes two BeaconMaster Layer 3 routers from Chantay Networks Inc. in Waltham, Mass. Once the project is completed, the network will have 65 Chantay BeaconPoint 802.11a/b/g access points, Roybal said.

Addressing Security

The VoIP phone service will replace a dedicated 900-MHz phone system that had trouble operating in some areas of the steel and concrete structure. The VoIP service will also get around a ban on using cell phones in

the courthouse, according to Roybal.

Luc Rey, senior director of product management at Chantay, said the BeaconMaster routers used in the Bernalillo courthouse segregate traffic and subject it to a firewall through virtual private network connections. Each router is capable of supporting 50 VIPNs.

Roy said network managers can control access to subnetworks by assigning different sets of Wi-Fi service set identifiers, the header broadcast by an access point. Client devices must use the same SSID as the one broadcast by the access point, and judges, lawyers and jurors will all be assigned different SSIDs in the courthouse.

The network uses two BeaconMaster 1100 routers, which can support up to 100 access points each and are priced at \$22,000 apiece. The BeaconPoint access points cost \$395 each.

Roybal said he has equipped the court security force with 36 NetLink Wi-Fi VoIP phones from Spectralink Corp. in Boulder, Colo. Ben Guderian, director of marketing at Spectralink, said the phones cost \$995 each. Although that might seem high compared with the price of basic cell phones, which go for around \$100, Guderian said mobile VoIP users save on monthly costs for airtime.

McMillan said the Bernalillo installation is the beginning of a trend in Wi-Fi deployments at courthouses nationwide. The state of North Carolina plans to install Wi-Fi in all 100 of its courthouses, while New York-based Courtroom Connect has installed free-based Wi-Fi networks in 21 state and municipal courts.  48737

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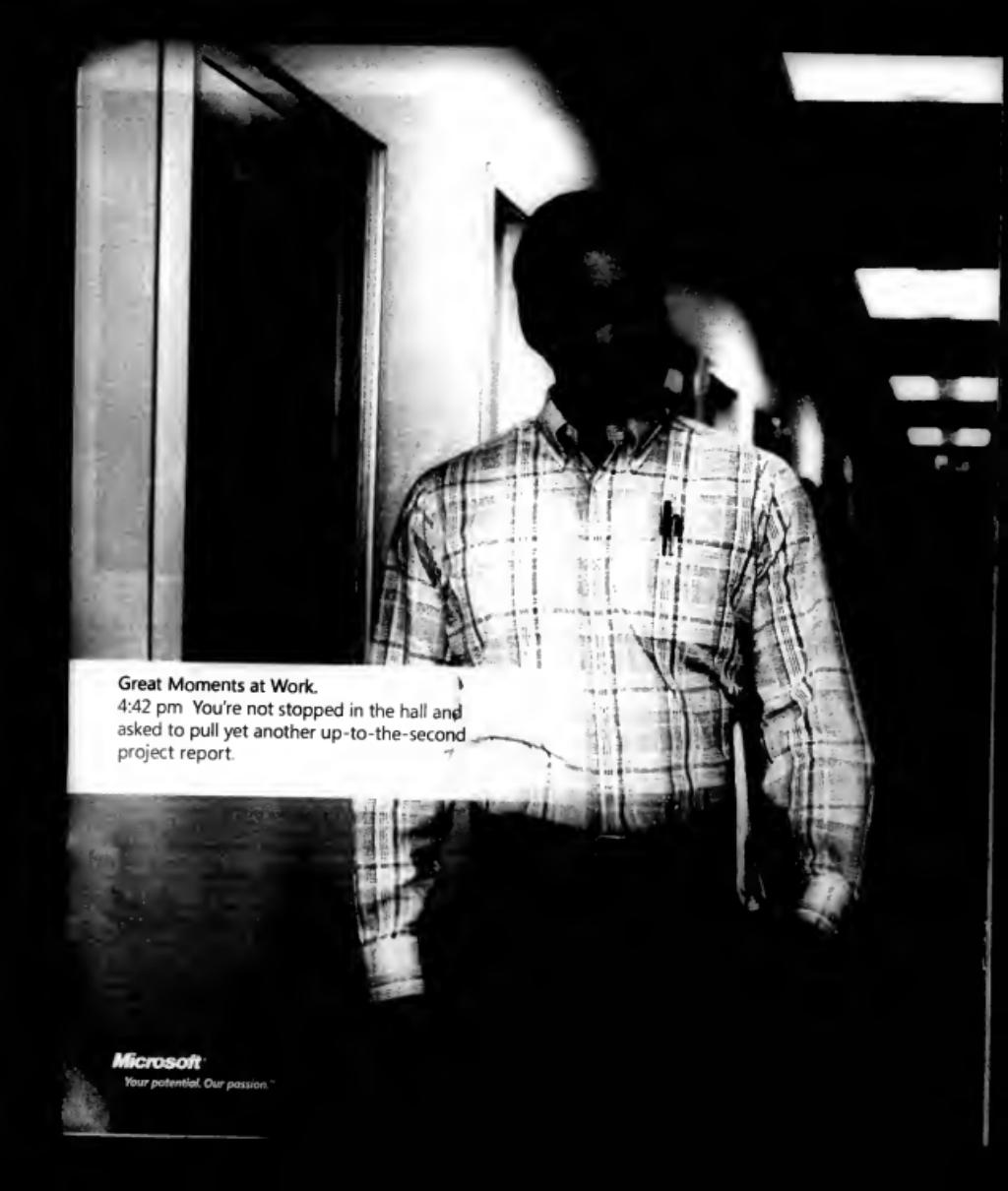
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MARYFRAN JOHNSON

Security Blind Spot

SOME OF OUR READERS objected strongly last week to Dan Verton's front-page story about the potential dangers of sensitive company information posted on corporate Web sites [["Online Data a Gold Mine for Terrorists," QuickLink 486623](#)]. They felt it was irresponsible to call attention to the problem and accused us of showing poor judgment in identifying specific examples from corporate Web sites.

"Please, spread the fear," one reader sarcastically suggested. "Is this Computerworld or Fox News?"

"You do more harm than good," wrote another manager. "If there are people out there that didn't know about it before, they do now!"

"Although it raises some awareness," said a systems engineer, "now you've added some details and hyperlinks that allow the terrorists to see more data. Something to think about."

I certainly agree it's worth thinking about. But I still believe it's far better to recognize potential dangers than to ignore them. The Department of Homeland Security thinks so, too. Amit Yoran, director of the National Cyber Security Division at the DHS, encouraged our reporter to write about this issue. "Not thinking through the security implications of some of the information put online can be a very dangerous mistake," Yoran said. Another senior intelligence official at the DHS gave us a real example of that danger, pointing to the recent capture of an al-Qaeda computer engineer whose laptop contained photographs and floor diagrams of U.S. buildings.

Unfortunately, this story could have been headlined "Online Data Still a Gold Mine for Terrorists," since we called attention to the exact same issue more than two years



ago [["Web Sites Seen as Terrorist Aids," QuickLink 270599](#)]. In that story, we cited a security audit that turned up startling amounts of sensitive internal information made available on corporate Web sites, such as building plans and schematics, elevator system specs, wireless network details and infrastructure diagrams.

Why on earth does the public Web site for Entergy Corp.'s Indian Point nuclear power plant still post details about its reactor design [[QuickLink 486751](#)], including the thickness of the reactor's various layers and the types of steel reinforcement bars? For school science projects?

Not surprisingly, security analysts and consultants lined up in favor of calling attention to such lapses. "I thought the piece on the building plans was great," one security consultant wrote in our reporter.

"This is an area that just does not get considered."

But the issue isn't restricted to corporate entities. One security manager at a technical services company in the Midwest wrote in about a U.S. government Web site that freely distributes a software package that, in his view, could help terrorists plot "a chemical or biological weapons attack." The software is actually intended for emergency response teams, he said, "but after seeing it, I would say it could be used by terrorists quite easily."

The problem, of course, is that most of us think like the good guys, not the bad guys. We don't look at a sharpened pencil on a desk and see a deadly weapon. Who wants to live that way?

There's also an argument to be made that this isn't an IT problem at all. The content of most large company Web sites is usually managed by marketing and communications departments, and they're more worried about presenting a good image than about the implications of posting a photo of the underground parking garage.

So tell me: If IT and security managers don't pay attention to this corporate security blind spot, who will? **© 48782**



MICHAEL GARTENBERG

When Mobile, Connectivity Is Everything

IT WOULD BE GREAT to have a unified architecture for mobile digital content, applications and devices, an architecture that would let me link my efforts at work with my content and information at home seamlessly. I could be mobile and still access any critical information that was contextually relative.

Although the unified platform doesn't exist, an emerging crop of portable devices does, thankfully, grant me greater flexibility in synchronization and connectivity. While the PDA market is revolutionized, the need for disconnected PDAs is rapidly declining. In fact, a few years ago, I predicted that most portable devices sold on the market would have at least two forms of connectivity built in.

That proved to be correct, and today connectivity should be a primary driver when you're looking into mobile device purchases for business use. There are several factors that come into play in making the purchasing decision:

First, you need to decide how many devices you for your users want to carry.

For most users, it will be no more than three, with two being the sweet spot. Form factor is important as well — there's a huge difference between a device that's truly pocketable and something that needs to go into a case with a laptop.

And pay attention to battery life. No matter how small the device is, once the battery goes, it's a brick.

That's all on the importance of primary and secondary functions. If voice is important, you might want a small, dedicated cell phone that's separate from other functions and therefore always available. If e-mail or messaging is important, make sure a keyboard is available for the device. (A good rule

Fr: I need training to install this
To: my intern installed this

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TECHNOLOGY

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wanted customers. Personalized experiences with the company in extension to Web site

Getting Personal [AGAIN]

Personalization technologies didn't live up to their hype during the dot-com boom, but some companies are taking another look. **BY KYM GILHOOLY**

HEN MARVIN SCHWAN decided to bolster his family's dairy business by selling ice cream door to door more than 50 years ago, he quickly developed relationships with the customers on his route. He must have been doing something right: Since then, privately held The Schwan Food Co. has grown into a frozen-food giant, with 5 million customers in 48 states and estimated revenue of \$4 billion. It sells into homes through its Schwan's Home Service Inc. division as well as into retail locations.

When Schwan's decided a few years ago to leverage the Web as a key customer sales channel, executives wanted to translate the personalized experience customers get in their homes and through the call center into the online experience, according to Glenn Bader, director of e-commerce and emerging channels at the Marshall, Minn.-based company. Doing so required, among other efforts, centralizing data from the customer master file and other sources in a dedicated data mart and finding personalization software that could recommend an individualized mix of products and offer personalized incentives to site visitors. For its personalization, campaign management and marketing analytics needs, Schwan's chose Interaction Advisor from San Mateo, Calif.-based EpiPhany Inc.

Personalization technologies came on the scene to much fanfare during the dot-com craze, but for a number of reasons, they didn't live up to the hype. Based on concepts such as one-to-one marketing, personalization tried to treat all customers as unique, but the numerous business rules required to do so were difficult to maintain and greatly affected online system performance. Moreover, many businesses found that the majority of their customers simply weren't different enough to justify the expenditures.

Nonetheless, many large companies today are seeing significant returns from personalized marketing, sales and customer service efforts through CRM strategies that combine a host of factors. They use appropriate personalization algorithms and sophisticated analytics for understanding behavior and focus on a smaller group of customers — typically high-value, frequent customers.

For example, Harrah's Entertainment Inc. in Las Vegas has bolstered highly segmented customer data used for its casino customer base with a personalization strategy for its premier 100,000 customers — who generate 30% of its revenue. Harrah's uses the Clienteling product from Blue Martini Software Inc. in San Mateo, Calif., to implement the program.

Daily or even more frequently, managers establish contact priorities for Harrah's service-oriented hosts by running Cognos queries against a Teradata warehouse to identify appropriate segments and then feeding results into the Clienteling data mart. Blue Martini's personalization engine generates contact names and reward offers appropriate to the current promotional campaign of Harrah's. For example, if an event on a certain night isn't filled, hosts can tar-

CONSUMERS WANT PERSONALIZED CONTENT

U.S. Internet users interested in personalized content

Age	Percentage of Respondents
18-24	67%
25-34	65%
35-44	70%
50+	77%

U.S. Internet users who are willing to provide demographic data in exchange for personalized content

Age	% of Respondents
18-24	69%
35+	69%

Source: 672 respondents surveyed in May 2004
Source: Clickstreamer.com, Cambridge Web

get specific customers and make a personalized offer based on behavior and preferences.

"We're able to highly customize with Blue Martini's [personalization engine]. Managers dictate more of the prioritization and are able to generate the right names," says David Norton, senior vice president of relationship marketing. Thanks to this effort, says Norton, Harrah's has increased revenue from its premier customer segment by 28% over the past two years, while its other segments have experienced modest growth rates.

PERFORMANCE ANXIETY

When Schwab developed its personalization strategy, according to Bader, the company paid attention to factors that have historically caused failures in such efforts: performance problems, databases with conflicting customer data, lack of interaction among channels and unreliable personalization techniques.

Because Schwab had deployed the analytics and campaign management components of the E-Phillypian platform before the personalization, the company had already done a significant amount of work on its data mart. Database work was greatly aided by the fact that field reps had been using DOS-based handhelds since the 1980s that fed a customer master file, from which they populated the data mart, says Bader.

Also key, says Bader, was making personalization contextually relevant, an area where efforts often fall short. Doing so requires personalized strategies that don't rely on just one technique such as collaborative filtering or rules-based algorithms but combines them to, for example, make a purchase recommendation. While exploring other food sites to prepare for Schwab's personalization effort, Bader had a personalization engine recommend an onion and a bottle of wine for a family dinner, and he was determined to avoid similar problems.

"If you're going to use [collaborative filtering] to upsell, there have to be business rules that go around it for specific situations," he says. Bader rejected pure rules-based software as well as pure collaborative filtering platforms "because they didn't have a lot of ability to build rules around them." Ultimately, Schwab added business-specific rules within the E-Phillypian system, and those that the system couldn't accommodate were built outside of it.

As for the site's performance, "we were obviously concerned about tapping into a technology where there were questions about whether it would scale or perform, particularly with our traffic and sales volume," says Bader. But the cache-driven nature of E-Phillypian's personalization engine has thus far alleviated concerns. "There's an element of real time where [the technology] captures new information as to where customers are going, but when it's making a call into the personalization engine itself, it's not querying to figure things out — it's a cache-driven operation," he says.

The personalization engine takes into account elements such as a user's purchase history, pages visited, demographic data and profile to make recommendations. Not only has the personalization effort improved Schwab's upsell rates at online checkout, but it has also improved overall conversion rates and increased order frequency, says Bader.

Performance was also a concern for A&E Television Networks when it decided to better target customers by offering separate online stores for its A&E Television History Channel and Television Channel merchandise, says So Young Park, director of e-commerce at the New York-based company.

A&E abandoned its earlier e-commerce platform, in part because it couldn't scale, and rearchitected its site — a three-year effort behind which sit the separate storefronts — based on Art Technology Group Inc.'s Commerce Suite and its Dynamo personalization technology. Now, depending on preferences defined during a registration process and based on past behavior, customers get individualized content and store promotions specific to each channel. If they have opted to receive e-mail content, they receive targeted messages based on their profiles.

Due to limited IT resources, A&E opted to use ATG's packaged personalization "scenarios" — rules-based "if-then" processes that deliver recommendations based on user interests, history and so on. The company uses SiteCatalyst Web analytics from Orem, Utah-based Omniture Inc. to analyze how its Web page tags are working.

ATG's personalization strategy has helped it brand the individual stores, which together have 5,500 products. "Among other things, it's improved conversion up to 50%. While our earlier [combined] storefront might have converted 3% of visitors, our individually branded storefronts convert anywhere from 5% to 10%," he adds. "It's helped obviously from a merchandising and sales perspective, but also branding," says Park.

Before a company undertakes any personalization effort, say experts, they've got to determine the value to customers. Ultimately, if you give appropriate credit to customers, they'll much more likely to remain loyal, says Chris Selland, an analyst at Aberdeen Group Inc.

"Customers should be managing you in a relation-

ship, rather than you managing them," Selland says. "Personalization used to be all about marketing and pushing offers in people's faces. Now it's almost become personalization as a customer service tool rather than a marketing tool. It's about establishing preferences as to how and what customers like to buy and how they want to be communicated with."

48887

Gilhooley is a freelance writer in Falmouth, Maine. Contact her at lymg@maine.rr.com.

The Privacy Dilemma

Personalization is only as good as the data it's based on. The more you know, the better it is, the more relevant the personalized information. The problem is, privacy concerns have customers increasingly shy about sharing. This, coupled with legislative hurdles such as the "Do not call" initiative, leaves businesses hard to figure out ways to maximize such interaction with a customer and then securely develop the relationship.

"Companies have to avoid the 'marketing gone wild' mentality, as every interaction is a reflection on brand," says analyst Elena Andriana of Forrester Research Inc. She recommends that they focus on building customer relationships based on proactive services, leveraging personalization techniques on inbound channels to maximize the interaction when a customer makes contact. "It's the reason marketing should own the contact center; if interactions are done right, they're service-oriented instead of the hard sell," she says.

At Mahwah, N.J.-based Sharp Electronics Corp., privacy policies dictate that the company doesn't share customer data and that it never sends unsolicited e-mail to existing customers, according to Fred Koenig, vice president of marketing and planning directions. As part of its acquisition strategy, however, Sharp does send e-mails asking recipients for permission to establish relationships.

For its part, Schwab follows a policy not to collect data it won't use, both to streamline operations and because the company doesn't want to intimidate customers.

"Having a purpose for collecting personal data, and always opt-out requests," says Chris Selland, the director of e-commerce and emerging channels.

According to Gartner Inc. analyst Adam Savore, privacy legislation can actually be a boon to personalization initiatives — at least in the case of "opt-in" personalization, in which a company collects data with the customer's permission, with the promise that it will use the data only in their relevant context.

"Every company should have user profiles that allow customers to set preferences when they want to be contacted, how often and about what. That's explicit personalization, and it can be extremely powerful," says Savore. While the open nature of the Web offers the best interface for creating user profiles, the data should be expanded across databases that track every relevant contact point, whether it be through a e-mail or call center or a point of sale. "The trick is not just how often the Web has to make it part of the complete user profile," Savore says.

—Kym Gilhooley

BRIEFS

Autodesk Updates Design Software

Autodesk Inc., in San Rafael, Calif., has announced a new release of Autodesk Buzzsaw, design software that helps keep building, manufacturing and infrastructure projects on time and on budget. Buzzsaw 6, available now, includes project portfolio management reports on schedule, budget and project status, as well as a dashboard with key performance indicators for all projects that are under way, Autodesk said. Pricing starts at \$30,000.

Veritas Upgrades Replication App

Veritas Software Corp. this month announced Storage Replicator 3.0, software aimed at protecting remote office data through real-time data replication. Storage Replicator allows organizations to centralize backup without disrupting normal server operations. It does that by replicating remote office data over an IP connection, either continuously or on a scheduled basis, to a central location where it can be rapidly backed up and stored, according to Veritas. The software is available now and costs \$1,495 for Windows Server and Advanced Server.

VMX Tool Monitors Linux, Unix Clients

Ventela Inc., in Linden, Utah, has announced that new Ventela Management Extensions 1.0 are now available. The extensions allow Unix, Linux and Mac OS X clients to be managed and monitored natively from within Microsoft Systems Management Server 2003, according to Ventela. VMX 1.0 is an administration console snap-in and client for SMS that solves multipplatform administration and management problems, the company said. VMX starts at \$1,995, including unlimited administration workstations and five managed workstation licenses.

THE OTHER DAY, I needed to reach my elderly parents, who were traveling, on an urgent matter. Not to worry, I thought: They have a cell phone. There was just one tiny problem: They had recently

switched carriers and been issued a new phone and telephone number. I couldn't get that number to save my life, which is too bad, since sometimes a phone call is a life-and-death matter.

Today, there is no public nationwide directory of cell phone numbers, no nationwide 411 service and no white pages that include everyone's cell numbers. Even if you know the person's cellular carrier, it won't help. No matter what you say, the customer service representative won't release the number. I said everything, tried every angle, but to no avail.

This situation might have made sense in 1993, when the 16 million cell phones in use were treated like handy accessories. In 2004, however, the industry has some 160 million subscribers, according to the Cellular Telecommunications & Internet Association (CTIA), and an increasing number of those customers use the cell phone as their primary communications medium. Today, not having a public mechanism to look up consumer and business cell phone numbers is just plain ridiculous.

Like wireline customers, wireless users have phones. They have phone numbers. But since they choose wireless as the underlying medium, the game changes. Their names just disappear from phone books, online white pages and national calling directories.

The technology to create a nationwide cellular phone number database



has always been available.

The problem is that the competitive, fragmented wireless industry, with its Byzantine service contract and billing models and a general sense of paranoia, has conspired to prevent such a directory from being created. The thinking is, Who wants to receive telemarketing calls when you're paying by the minute for incoming calls?

In a competitive market, what carrier wants to share its customer list with other vendors for the sake of creating a directory?

Now the industry is finally pushing ahead to create a nationwide directory-assistance database. It will be less inclusive than traditional directories, limited to listing only those who ask to be included. There will be no charge to be listed, and vendors have pledged not to sell or publish the data. The effort is a good example of how to use technology to give people choices.

But you wouldn't know that, given all the ruckus. Privacy advocates, conspiracy theorists and folks who just don't like the idea of carriers possibly profiting by distributing wireless user data are objecting. It's not enough that they don't need to do anything to keep their own names out of the directory — they don't want yours in one, either.

Surprisingly, one of the most vocal opponents is Verizon Wireless. CEO Denay Strigl called the initiative, led by the CTIA and a consortium of five major wireless carriers, a "dumb idea."

He claims to be defending his customers' privacy and says that users don't want such a directory. This argument is a bit disingenuous, to say the least. Verizon already publishes and shares my wired phone number and address information. If I don't like it, I have to pay them to stop the practice by making my number unlisted. But for some reason, wireless should be a special case, they argue.

Some businesses don't like the idea of having employee phone numbers appear in a 411 database, fearing telemarketing calls. But businesses can protect those wireless phones just as they would any wired line. They can choose not to list the number.

Every cell phone today has Caller ID to screen calls. Call blocking is available. And users can demand new features such as one that allows only calls on an approved phone list through while blocking others or routing them to voice mail. Or users can turn the damned things off when they're driving or don't want to be interrupted. Certainly, plenty of technical solutions exist if the industry wants to implement them.

It's time to stop thinking about wireless as the special case and treat it as just another phone. The fact is, it's just another option in a world of telephony technologies that are rapidly converging. Verizon's own move toward converged service offerings that mix local, long-distance and wireless plans in a single package is evidence of this trend. Not to offer users a choice is to do them a disservice. Instead of telling customers what they want, telephone service providers should offer nationwide 411 service and let users decide for themselves. © 46792

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ROBERT L. MITCHELL

Wireless World Needs a Directory

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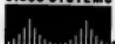
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MANAGEMENT

08.16.04

10 mistakes that can suck the funds out of your IT project budget - and how to avoid them. By Mary Brandel

IT PROJECTS ARE NOTORIOUS for being over budget. In fact, Gopal Kapur, president of the Center for Project Management in San Ramon, Calif., estimates that 77% of projects blow their budgets, with an average cost overrun of 16%. As for the remaining 23%, Kapur doesn't have a lot of faith in those project managers. "They just lie about it," he says.

Perhaps if project managers knew where the biggest money wasters were, these statistics would improve. With that in mind, we spoke with experienced project managers and other experts to find out where the black holes of project management are and how to avoid them.

1 Scope creep. It can begin early, at the requirements definition stage. "People say, 'We're spending the time and money anyway, let's add

this and this,'" says Mark Reilly, director of IT at the Corporation for Public Broadcasting in Washington. "This expands the scope way beyond what you can accomplish or really need."

Even well-planned projects expand up to 2% on their own each month throughout a project's duration, says Capers Jones, founder and chief scientist of Software Productivity Research LLC, a consultancy in Marlboro, Mass. One reason is "technical gold-plating," explains Gregory Fouquet, a consultant at Ouellette & Associates, a consulting firm in Bedford, N.H. "It's where well-intentioned programmers add features and functionality that haven't been specified but are neat or slick," he says. "It eats away at productivity and introduces difficulties in testing." **SOLUTION:** Keep to core functionality by defining requirements as "must

BUDGETARY Black Holes



MARK REILLY/CPB

haves," "should haves" and "nice to haves." To keep developers in check, Fouquet advises rigorously specifying must-have requirements and tracking them through the development process. "This is trickier for project managers who come from the business side and don't understand technical complexities," he says. For these managers, enlist the help of a good, credible IT person. Reiley also suggests lowering user expectations by releasing something small in scope that you can add to later. "Usually Version 1 is the prototype, and when users see it, it's good enough," he says.

2 Building a too-sophisticated GUI too early in the project. Most graphical user interfaces change dramatically from the requirements definition stage to the final release, says Johanna Rothman, president of Rothman Consulting Group Inc. in Arlington, Mass. And yet developers are always tempted to perfect the GUI in electronic form at early stages in the project. **SOLUTION: Start with low-tech GUI prototypes.** Rothman suggests representing the user interface with either a paper prototype, using colored pens and yellow stickies, or through a drawing program or software such as Photoshop. "If you start off with an electronic representation of the GUI, it's incredibly expensive," she says. Don't do it until you've frozen the plan.

3 Lack of negotiation skills. Few project managers get formal education in how to negotiate the best prices for software or contract labor. "They are like lambs waiting to be fleeced," Kapur says. **SOLUTION: Develop basic skills.** At the Center for Project Management, Kapur asks project managers to give him an offer for a new and a used car. He checks to see if they use the Web to research accident histories and Kelley Blue Book values, as well as how many dealers they contact and how much they find out about financing terms. "I like to see the process they've gone through, and most have just not learned it," he says.

Negotiation skills are also communication skills. For instance, after you've made an offer, Kapur says, don't say a word. "Instead, [silently] count or re-cite the names of people you know," he says. "Most people can't handle that." Kapur also suggests that project managers spend a week in the procurement department to learn how negotiations are handled. For instance, purchasing software at the last minute can be

three to five times more expensive than buying it in advance.

4 Not understanding project finance, which is different from project accounting. "People just don't understand what money means — like if I add money to this project, another project can't be done," Kapur says. **SOLUTION: A short course in financial concepts and terminology.** Particularly for complex projects that last longer than six months, Kapur advises project managers to educate themselves and their teams on concepts such as internal rate of return and net present value. [QuickLink 46832] "We're not making people experts, but they should have enough knowledge to recognize both the problem and the solution," he says.

5 Implementing large, big-bang projects. Research shows that per-person productivity decreases as the project size goes up, says William Roetzelheim, founder of Cost Xpert Group Inc. in Rancho San Diego, Calif. Additional communication overhead, more formal requirements, more detailed design and the increased number of meetings all add expense. With small projects, Roetzelheim says, the time spent implementing the project is 60% of the total versus 8% to 10% on very large projects. "The rest of the time is spent on coordinating, communicating and additional testing," he says. **SOLUTION: Break up projects into smaller, more manageable pieces.** Studies have shown a correlation between high failure rates and large projects, Roetzelheim says, but smaller projects are also more cost-effective.

6 Overtesting. We've all heard of analysis paralysis. Reiley suggests that there's also a phenomenon called testing paralysis. "Maybe it's because you've had a bad experience in the past with bugs popping up at the last moment, so you keep testing and testing," he says. Or developers could just be playing with fonts to impress users. The result: overshoot deadlines and a waste of resources. **SOLUTION: Accept it. There are going to be bugs.** At some point, you have to say, "Enough is enough," Reiley says. Tell the users that there will be bugs and that the team will work them out. Shoot for 80% perfection, not 100%.

7 Duplication or overlapping tasks. Particularly in large, dispersed companies with no central IT department, you might not know that

application works, so they can't come up to speed quickly. "That's completely a waste of money," she says.

SOLUTION: Cut your losses, and next time, use an estimating tool. The best thing to do when you realize that you didn't estimate resources properly, Rothman says, is to figure out the minimum requirements for finishing the current project and immediately begin planning another project in which you can save your money more effectively. Roetzelheim also suggests estimating tools as a means to predict costs and schedules.

8 Lack of cost-to-date and estimate-to-complete data. Too often, team members are completely unaware of whether they're on track with the project budget. At Comdex one year, Kapur asked 800 people in one of his sessions to tell the people seated next to them what their project budgets were and the costs to date, rounded to the nearest thousand dollars. Only 7% were able to do it. **SOLUTION: Develop and monitor cost-to-sign thresholds.** Kapur uses a process where the sponsor and the project manager jointly define cost thresholds. He also recommends telling the sponsor that cost overruns will come out of his own budget or even his paycheck as a wake-up call to track costs.

9 The project should never have been authorized. Projects can get assigned that have little business justification or just don't pass the "smell test," as Ouellette's Fouquet puts it. How do you avoid setting something in motion that's destined to be a true money pit? **SOLUTION: Forget the politics; stop the project.** At the very least, says Reiley, "everyone should be able to answer, 'The purpose of the system is blank.' If you can't describe it in a few words, maybe your focus is too broad."

It's the project manager's obligation to validate a project's legitimacy, Fouquet says. "It's what distinguishes a professional project manager from a huckster," he adds. For instance, if you realize halfway through the project that there's no business-side commitment to a training plan, stop the project, advises Bob Benson, a senior consultant at Carter Consortium in Arlington, Mass. Adds Benson, "Project managers have to be willing to call it bad news when it's bad." **Q 48381**

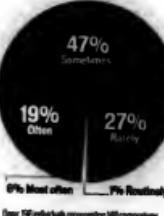
Brundel is a Computerworld contributing writer in Grand Rapids, Mich. Contact her at mary.brundel@comcast.net.

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EVENTS

Oracle User Group

■ Sept. 21, New York
Sponsor: New York Oracle Users Group Inc.

New York Metro Area Oracle User Group Day includes database administrator, developer, application and workshop tracks. Topics include performance optimization, CRM, self-service modules, Web applications and upgrading. More information: www.nyoug.org

Emerging Technologies

■ Sept. 29-30, Cambridge, Mass.
Sponsor: Technology Review
The 2nd Annual Emerging Technologies Conference at MIT showcases technologies that are poised to make a dramatic impact on the world. Topics include the pipeline problem, nanotechnology and energy, next-generation search, synthetic biology and the tech job drain. More information: www.technologyreview.com

Network Security

■ Sept. 29-Oct. 4, Las Vegas
Sponsor: SANS Institute

Network Security Conference 2004 offers instructional training and security certifications. Tracks include boot camp; intrusion detection; hacker techniques; securing Windows, Unix and Linux; auditing networks, perimeters and systems; system forensics; and secure communications. More information: www.sans.org/ns2004

Data Center World

■ Oct. 3-6, Atlanta
Sponsor: AFCOM

Data Center World offers tutorials and educational sessions on data center management, facilities, best practices and contingency planning. Topics include security, managed storage services; threats, viruses and worms; utility computing; and ultra-high-density racks and blade servers. More information: www.afcom.com

BARBARA GOMOLSKI

Summer Reading

I STRUGGLED TO FIND a meaningful topic this month, which is unusual for me. Then it occurred to me: It's summer, and I've been on vacation. That explains why my mind is less focused on IT management topics and more focused on summer reading. Since we're in the summer doldrums, I thought I'd have a little fun. (I promise to return to the serious business of IT management next month.) I've created a summer reading list that only an IT person could appreciate. Unfortunately, this is a book list we aren't likely to see anytime soon.

Rich IT Guy, Poor IT Guy. Forget what your father told you. Those of us who choose careers in IT rarely get rich doing it. If it's wealth you're looking for, check out another title: *Bringing Down the House: The Inside Story of Six MIT Students Who Took Vegas for Millions*, by Ben Mezrich (Free Press, 2003).

The Usual Voter. A Harvard professor and amateur programmer stumbles on something even more elusive than the Holy Grail when he manages to effectively block spams from his Outlook in-box while on vacation in Paris. Follow the twists and turns as our indomitable hero encounters unexpected and deadly resistance from a cadre of computer industry executives. These IT industry titans, it turns out, will go to any lengths to keep their secrets intact.

Seven Habits of Highly Sleazy IT Salespeople. While the last person you probably want to think about on your summer vacation is an IT salesperson, this book is worth your time. The bait-and-switch, the hyperexaggeration, the

high-pressure sale and, of course, the blatant lie are all covered in this must-read. Learn how to recognize some of the worst behavior you've ever encountered from some of the best-looking and best-dressed people you will ever meet.

The One-Minute Programmer Analyst. Sure, it would be great to spend hours listening to your business management's requests, needs and ideas. But

who has that kind of time? This classic handbook will show you how you can become more popular with your co-workers while significantly reducing the amount of time you spend actually listening to them. Guaranteed to make you more productive at your job, so you can move on to what's really important: surfing the Web at work.

Who Moved My Cubicle? How to stay flexible and happy in a world where your cubicle — and your job — are likely to wind up overseas. This is part of a series that includes the wildly successful *Who Moved My Cell Phone?*

Needs Down: How to Avoid the Arrival of New Management. While I would be the last person to "dis" the heads-up approach to career management, there is a real art to keeping one's head down. This quick-moving narrative is an IT person's guide to detaching, disengaging and simply avoiding the interaction involved in management upheaval. The book's central theme is spot on: Why look up? In six months, there will be a new leader and a new strategy anyway.

R is for Neerg. Our favorite sleuth is at it again. This time, she's chasing after the genius who thought up the latest IT management shake-up. This well-meaning strategist has mysteriously disappeared, along with a whole bunch of the company's money. The problem is that nobody noticed the disappearance or seems to care. Can a woman who drives an old car, eats at McDonald's and uses common sense outwit a savvy management theorist? You betcha.

The Care and Feeding of Users. Your relationship with users is in bad shape, and guess what — it's pretty much all your fault. This book will make you feel guilty, undeserving and incompetent. However, I am confident that by Chapter 5, you will have your priorities in order and everybody will like you again.

The South Beach Programmer's Diet. You may not lose weight on this diet rich in pizza, late-night snacks and full-throttle soft drinks, but your productivity is guaranteed to soar (at least for an hour a day). Includes a recipe book of microwave favorites and a sticker book so you can label your goodies in the company fridge. © 48386

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KNOWLEDGE CENTER WEB SERVICES

OPINION

Blurry Web Services

XML is terrific. It's sliced bread on stilts, says columnist Mark Hall. So, why is it so slow? And why can't it deal with opaque data? **PAGE 41**

Message Received?

Companies that require a high degree of reliability from Web services are learning to customize their own coding and build in layers of redundancy. **PAGE 36**

08.16.04



Trouble in Transit

The same design that lets users easily exchange data with Web services also opens holes for hackers. Companies are finding that safeguarding that data exchange is complicated. **PAGE 37**

EDITOR'S NOTE

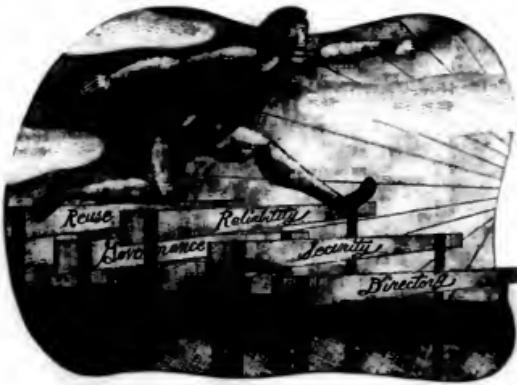
LAST YEAR, we boldly predicted a Web services tsunami (QuickLink 38153) with XML and SOAP changing a wide swath of IT development. OK, so it's really more like a rushing river than a tidal wave. But the river is still swelling. A recent IDC survey of 197 IT managers shows that about a third of the respondents have completed one or more Web services projects, and more than a third are either evaluating the technology or doing a pilot project.

Much of the activity involves employee portals, e-commerce, back-office applications and even mission-critical work. IDC says.

But a tsunami it's not. Why? As usual, the technology is more difficult to implement than the vendors would have you believe. Pilot projects aren't so bad, but even well-funded adopters in the financial services industry have found it tricky to come up with a service-oriented architecture (SOA) for the whole company.

So we're taking a more sober look this year. Our first story is about the challenges of SOA granularity, repositories and governance (page 34).

IDC says the top barriers to Web services adoption are a simple lack of management and a not-so-simple lack of security. We can't help you with the budget, but we do have an update on the security issues (page 37). We also cover the topic of message reliability, which doesn't rank as a burning issue yet, but IDC says it will become one as the volume, scale and complexity of projects grow (page 36). **© 4837**



Web Services Hurdles

Developing a service-oriented architecture is full of challenges, such as governance, security and reliability.

Mitch Bets is Computerworld's Features editor. Contact him at mitch_bets@computerworld.com.



You could have hundreds of Web services. Here's how to make sure you can organize, catalog, find and reuse them. By Carol Sliwa

DANSKE BANK A/S's trailblazing work to build a service-oriented architecture had gotten so advanced that it exposed more than 1,000 services from its mainframes and application servers. But the Copenhagen-based bank found itself in a frustrating predicament.

"We couldn't find them," says Claus Torp, the company's chief architect.

The problem threatened to wipe out one of the main benefits of service-oriented architectures (SOA) — reuse. So Danske set about revising its concept of a service, refining its repository and establishing a governance process to enforce best practices.

The result was a collection of 140 services that is far more manageable.

An in-depth look at several SOA pioneers shows that the steps Danske Bank took are key to a company's ability to reuse code, build applications with greater speed and efficiency — and ultimately save money.

But it's not easy, and the implementation sequence is important. Sun Microsystems Inc., for instance, built a registry and set up an architecture review board. But the IT department is just now circling back to do a closer examination of Sun's 80 to 100 Web services.

Karen Casella, an IT director at Sun, recommends that a company starting down the SOA path first look at its business requirements and identify which Web services are needed. "We learned the hard way," she says. "We put some of the infrastructure in place before we completely understood what we needed to have in play."

The Services

Companies need to figure out which business processes are turned into services, carefully design and define the services and distinguish them from components.

When Danske Bank began building standard interfaces to expose its legacy programs, it defined a service as "one function." Now it describes a service at a higher level, as a logical grouping of functionality and data, such as "customer" or "account."

The company's 140 services are each composed of about 10 "operations," or components, that are essentially more granular services. "There are currently more than 1,365 operations. Danske expects to eventually have 250 services."

How well a company can break down its business processes and application functions into services will determine the level of flexibility and reuse it gets, Torp says.

Managing the Building Blocks

Danake uses modeling tools to develop logical maps of the functional building blocks and business processes. Then it matches the business processes to the services to make sure it has solved the right problem.

"A lot of doing service-oriented development is making sure you can run different business processes on top of the same service building blocks," says Torp. "If you want to be effective, you have to make sure there is only one place to do the same function."

Cendant Corp.'s Travel Distribution Services division spends a considerable amount of time determining the optimal granularity of its services and service components, according to Chief Technology Officer Robert Wiseman. A service is something that can be called externally through Cendant's business domain model, dubbed Rosetta Stone. A service component, such as logging, is called only internally.

So a "get hotel" service might call several low-level services, such as a latitude/longitude "destination finder" that the company makes available to customers. But Cendant's currency converter is a component, since it currently isn't exposed to customers.

Cendant expects an ongoing project to extract components from monolithic applications to have a big payoff, Wiseman says. For instance, passenger name record (PNR) is a basic unit of data used by booking engines and global distribution systems such as Cendant's Galileo. By making "Super PNR" available as a service, the IT department won't have to maintain six or seven instances of PNR in different applications.

The Hartford Financial Services Group Inc. built pockets of Web and other services over three years ago, but its enterprise-scale SOA work didn't start until 18 months ago.

A good candidate for an enterprise service is one that two or more applications need, says Benjamin Moreland, manager of application infrastructure delivery at the Connecticut-based insurance company. "But not everything should be a service," Moreland warns, noting the potential performance hit from exposing services.

Establishing the Registry

Vendors may have expected Internet-based registries based on the Universal Description, Discovery and Integration (UDDI) standard to spread like wildfire. But early SOA adopters care more about internal registries.

That doesn't mean UDDI is dead, though. UDDI was so important to

Four Challenges

The development of service-oriented applications requires the following steps:

1 UNDERSTANDING which processes can be turned into services.

2 BUILDING a library of application processes. This will come increasingly from business applications that are designed as sets of services.

3 ESTABLISHING the granularity of services at the right level to ensure that services are effectively reusable. Too much granularity makes

SOURCE: DAVID PLUMMER, ANALYST, GARTNER INC. STYLIZED BY COMPUTERWORLD

The Hartford that it chose its registry based on the product's conformance to UDDI 3.0. (Officials declined to name the product due to a company policy against endorsing vendors.) The registry includes metadata describing the services and the means to connect to services via particular transports.

But the UDDI registry isn't meant for everything. Departments continue to maintain local registries for some services they create, because The Hartford is selective about what goes into its enterprise registry.

"We don't want to create a junk drawer of services," says Moreland. "What we feel should be in the enterprise UDDI are services that will give us leverage and flexibility across the enterprise."

Providence Health Systems uses the Infrawise Inc. management framework for its service library, and much to the surprise of company skeptics, its developers are actually reusing services, now that they can find the Web Services Description Language (WSDL) files defining the interfaces.

"We commonly refer to this as 'Google-izing' Web services," says Michael Reagan, Providence Health's Portland, Ore.-based director of research and development. "They can reuse services with minor modifications in a couple of hours. People are more productive. Everyone's happy."

Providence Health's greater concern these days is managing its growing number of Web services and SOA framework from an operational standpoint. The company has close to 50 composite services, each one comprising one to 20 more granular sub-services.

Early adopters that couldn't find a registry to suit their needs built their

services too specific to be used; too little granularity makes them too general to be used.

4 FOSTERING a reuse culture is important to consistent, repeatable success in capturing and using business processes. It enables an organization to deliver processes as a well-defined set of services and to make those services easily available to developers.

own. Danske Bank maintains separate repositories for components from its mainframes and J2EE- and Microsoft .Net-based application servers. The repositories replicate between each other, forming one logical repository that essentially is a superset of a UDDI registry, adding operational parameters for functions such as load balancing, says CHIO Peter Schleidt. A service integrator agent dynamically selects the most efficient way to call a service, using SOAP over HTTP or more efficient proprietary protocols.

Danske also has a structured library for its services and their corresponding interfaces. The library also houses information about the relationships between its functional and process models. There's even a librarian that developers can call for help. But the library didn't launch until a year ago — "a lot later than we should have been doing that," Schleidt says.

Governance

When push comes to shove, a governance body can help a company stick to its SOA principles. Danske Bank has steering committees in 18 different business areas for product, process and IT development. But when business managers are under pressure to beat the competition, they're sometimes tempted to foist the generic SOA approach if it takes longer to complete.

"You need a governance process where you can handle situations like that," says Schleidt. "We always have the time to change things afterwards, so why not try to turn it around and do it right the first time?"

The quick-hits approach can have long-term consequences. Danske now has two personalization engines, four interactive customer communication services and four payment-

handling applications, Torp says.

Two years ago, The Hartford formed a central group called the Property and Casualty Architects Collective to examine how it would adopt a SOA across the enterprise. The group put together a reference architecture outlining recommended approaches, practices and products to be used in a particular context.

"It's about shared architectural thought and reuse of thought processes. That's where the hard work and value is," says James McGovern, an enterprise architect at The Hartford.

A separate application infrastructure delivery group is responsible for selecting and implementing the management platform, business process engine and UDDI registry, as well as making sure the WSDL files used to describe service interfaces conform to standards. An architect not involved with a particular project reviews the project's application design to make sure services aren't duplicated.

At Cendant, project managers have that responsibility. The service name and input and output fields are accessible through an XML-based layer in its Rosetta Stone business domain model. A single group is responsible for updating the business domain model.

"This is how we control reuse," Wiseman says.

If a business domain owner spots a service already in the registry, the service is flagged as a candidate for reuse. A SOA governance board, largely consisting of IT managers, then takes over. Developers need not apply.

"The programmer is the last person that should make the decision," says Wiseman. "They will always want to write something new." © 46250

We don't want to create a junk drawer of services. What we feel should be in the enterprise UDDI are services that will give us leverage and flexibility across the enterprise.

Message Received?

Companies that require highly reliable Web services are building in their own guarantees. By Mary Brandel



WHEN PLACING AN ORDER over the Web, it's not unusual for the site to lock up during the transaction — it's all part of the Web experience, and customers know to call a customer service rep to see if the order went through. But take the human factor out of the equation, as in a Web services transaction. Who's 100% sure that their messages got through, unduplicated and in the right order? After all, you're relying on two applications to communicate with each other to complete the order, using standards such as XML, HTTP and SOAP.

"HTTP is a nice, lightweight mechanism to send HTML or almost any type of format. The problem is, there's no guarantee that the message will get delivered," says Anne Thomas Manes, an analyst at Burton Group in Midvale, Utah. "It offers 92% to 96% reliability, but if you need 99.9% reliability, or at the very least notification if a message doesn't get there, HTTP won't do that for you."

Although analysts don't think reliability is the only problem impeding Web services adoption, it certainly casts a pall of uncertainty over the idea of building anything mission-critical on such a platform.

Some users, such as Peter Osbourne, director of Internet research and development at Dollar Thrifty Automotive Group Inc. in Tulsa, Okla., say it's just fine with TCP/IP and HTTP. "We use Web services extensively [for Web-based car reservations] but have not encountered message reliability problems," he says. Dollar has mechanisms to detect message bottlenecks, but Osbourne says the company hasn't lost any messages.

At companies that need a higher degree of reliability, it's a matter of "hacking their way through the

jungle with a machete," says Ron Schmelzler, an analyst at ZapThink LLC. These users build reliability into the business logic of the application or employ a mature messaging platform such as IBM's MQSeries.

Once Isn't Enough

ShopNBC is one organization that has given Web services reliability a lot of thought, according to Steve Craig, chief technology officer and vice president of IT development at the shopping network, which it broadcast into 56 million homes.

ShopNBC relies on Web services to fulfill customer orders over the Web and to receive real-time pricing updates from its participating merchants. Because it's such a mission-critical endeavor, Craig and his group structured a three-layer system that supports three types of Web services messaging: real-time, near real-time and periodic. Each layer reinforces the others to create message redundancy in case the first message doesn't get through.

"If a real-time transaction fired and was missed, there'd be another job downstream to cover that need," Craig explains. Say, for example, a merchant system sends a message to the Web services system at ShopNBC to take a 10% markdown on a product that's airing on TV. If the real-time message wasn't received, another message sent to another server would eventually lower the price — maybe not while the product was airing, but in the next database sync. Another example is when customers order products over the Web. The Web server attempts to commit the order in real time with the back-end server, but if the server doesn't respond, the order is sent to a separate server to be synced up later.

Build, Don't Add

As ShopNBC demonstrates, reliability must be considered from the very beginning. "You never add reliability to something after the fact — it's not something you can just slot on top of the application," says Doug Peery, vice president of engineering at Black Pearl Inc. in San Francisco.

Black Pearl's B4 platform uses Web services to collect data from disparate sources to provide real-time customer profiles and data analysis. For instance, it sends financial services agents daily lists of high-priority prospects, as well as real-time alerts on products that might interest particular customers. The system needs to collect data from a variety of sources, such as legacy customer databases, marketing campaign systems and live data feeds on stock prices.

Revere estimates that half the code that makes up B4 is aimed at functionality, and half is intended for error checking. "Whenever you connect to a data source, you have to assume it will fail and have a planned response," he says.

Another approach is to employ a reliable transport protocol, such as a message queuing (MQ) service, rather than using HTTP to transmit Simple Object Access Protocol (SOAP) messages. The dominant MQ service is IBM's WebSphere MQ, which acts as a

mediator to guarantee delivery by storing messages locally until it receives delivery acknowledgment.

"You can send it over SMTP or FTP or an MQ system. Web services is completely independent of the underlying protocol," Manes says. The trouble is, MQ systems are proprietary — IBM's WebSphere MQ doesn't talk with, say, Sonic Software Corp.'s MQ system. This is less of a problem if you're just using Web services internally, but even then, it's an expensive proposition. According to Manes, MQ deployments can reach seven figures.

Using Your Header

To get beyond dependence on a proprietary protocol, companies will have to code specifications into their SOAP headers, Schmelzler says — such as having a system try to resend a message if an acknowledgement of receipt isn't received within 300 milliseconds.

Today, Schmelzler points out, individual companies need to do this sort of coding themselves, which can be extremely difficult. However, this coding will eventually be built into standards such as WS-Reliability and WS-ReliableMessaging (see box below).

In the midst of this industry confusion, the lack of a reliable messaging specification is pretty far down the list of what's stopping people from implementing Web services, says Dwight Davis, vice president of Summit Strategies Inc. in Kirkland, Wash. "There's a lot of baggage that comes into play on the list of factors," he says, including the relative newness of the technology and the need to focus on day-to-day crises rather than long-term architectural change. Just the same, before mission-critical Web services applications enter the mainstream, reliable messaging will have to become less complex and costly. **4876**

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Rival Standards

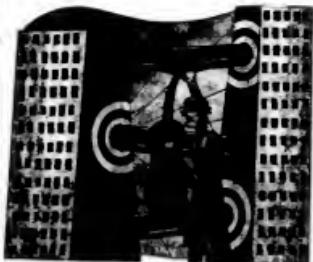
Two reliable messaging specifications are working their way into the industry:

Web Services Reliability (WS-Reliability): A SOAP-based protocol for exchanging SOAP messages with guaranteed delivery, no duplicates and guaranteed message ordering. **Sponsors:** Sun Microsystems Inc., Fujitsu Ltd., Hitachi Ltd., Oracle Corp., NEC Corp. and Sonic Software Corp.

WS-ReliableMessaging: A transport-independent protocol that allows messages to be delivered reliably between distributed applications in the event of software component, system or network failures. **Sponsors:** IBM, Microsoft Corp., BEA Systems Inc. and IONA Technologies Inc.

It's still uncertain which specification will become the industry standard, although Anne Thomas Manes, an analyst at Burton Group, is advising clients to bet on WS-ReliableMessaging because it's backed by more industry heavyweights. Users can also begin using WS-ReliableMessaging as a patch from San Francisco-based Cape Clear Software Inc., as well as in U.K.-based Systech Ltd.'s Systemer Server.

— Mary Brandel



Trouble In Transit

Web services put more of your company's data into the ether, offering more chances for someone to snatch it. By Bob Violino

A TRANSPORT COMPANY'S TRUCKS are scheduled for bogus pickups. A financial services firm's investment data is given away for free. A health insurance provider's private patient data is exposed. These are the disastrous situations that can occur when Web services is nefariously snatched midstream.

The shareable design of Web services, which gives companies the benefit of easily exchanging data and applications with business partners, also makes them vulnerable to security breaches. Hackers have found ways to tweak the XML code used to tag the data so that's actually an attack appears to be valid.

"XML standards are being constructed in bits and pieces, and that's the kind of event that leads to holes that someone didn't think about," says Ray Hefner, an analyst at Forrester Research Inc.

According to experts, hackers have three methods for breaching Web services and XML security: identity-based attacks, in which a hacker poses as an authorized user to gain access to Web services; malicious-content attacks, in which an intruder forces a Web server to perform an unauthorized activity; and operational attacks, in which a hacker manipulates an XML message to tie up server resources. But although the methods are known, safeguarding Web services is difficult because multiple elements must be locked down — the servers, the messages and the

applications. Companies must first secure their Web servers and then decide which business partners and employees will have access to them, how they'll connect to them and which authentication method to use.

No Small Task

Defense manufacturer Northrop Grumman Corp. experienced that difficulty firsthand. Web services are a major component of its Mynge.com portal, which was expected to take about six months to complete. But because of security requirements such as user authentication, the project took three times as long, says Thomas Shelman, vice president and CIO.

The portal gives Los Angeles-based Northrop Grumman a way to efficiently share ordering and billing data with customers and partners, he says. But while Mynge.com provides greater data access to more people, it also creates vulnerabilities because many users outside the organization have access to business applications.

"The portal was a significantly larger task than we thought going into it," Shelman says. "I know a lot of companies that are implementing the same sort of thing, and they don't address the security aspects. They're leaving themselves very vulnerable."

"The need for security goes up exponentially as you're trying to expose applications to your business partners," adds Raphael Holder, vice president of shared services operations at Northrop Grumman. He says the company first grappled with how to provide secure remote access to Web services applications for internal employees and ensure that all users entering the portal were authenticated.

"It sounds simplistic, but we're providing more capability here than we have through remote access in general," says Holder. "We're providing access to portlets that touch business data, not just e-mail."

To secure its data, Northrop Grumman deployed a public-key infrastructure system from RSA Security Inc., issuing tokens to all employees authorized to access the portal. Tokens will also be issued to appropriate partners and customers for different levels of access, Holder says. Eventually, the portal will have more than 120,000 users.

Even with the current technology in place, Holder acknowledges that there are security risks with Web services. "We will have to manage [the portal] very closely, and access will be done on a business-case basis with those partners we highly trust," he says.

Exploring the Options

As it explores Web services, Wyndham International Inc., a Dallas-based hospitality company, is also looking closely at how it can provide tight security. Wyndham's research shows that it endured more than 9.5 million attempts at information security breaches from May 2003 through May 2004. They included hacker attacks, Web site defacements and viruses.

"Obviously, security is a huge concern of ours," says Mark Hedley, the company's senior vice president and chief technology officer. He says Wyndham plans to get Web services from its provider of central reservation systems technology, Micros Systems Inc., using industry-standard protocols. Hedley says his company expects Web services to make it easier for

customers to obtain reservations and for Wyndham to share data with suppliers. Wyndham plans to finalize its security plan and implement Web services by the first quarter of 2005.

Hefner notes that there are several ways to approach Web services security. One of the most common is to secure applications at the transport layer, with two-way Secure Sockets Layer connections or a dedicated virtual private network link. SSL can include mutual authentication such as client certificates. Another option, which Hefner says is more suitable for connecting with multiple partners, is to use XML security gateways. These are network appliances that protect XML and Web services from attacks. They feature XML encryption, digital signatures, access control and other capabilities. Many in the industry expect that new standards will also help bolster security.

Hefner says Web services security is improving because of new standards and products. "XML security gateways provide better solutions for attack protection than existed a year ago," he says.

Security concerns shouldn't get in the way of Web services implementations, says Hefner. "You may have to spend more now on security than in three years," when more safeguards are built into Web services products, he says. "The bottom line is, if there's business value for Web services now, you shouldn't be holding it up." © 2004

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Help on the Horizon

A new industry standard is raising hopes for Web services security. In April, OASIS (Organization for the Advancement of Structured Information Standards), a global standards consortium in Boston, Mass., announced that its members had approved Web Services Security Version 1.0, a status that signifies the highest level of ratification.

WSS builds on security technologies such as XML Digital Signature, XML Encryption and X.509 certificates to provide a standard way of securing Web services message exchanges. The standard provides a framework for companies to apply security technologies such as authentication and authorization in a Web services environment. WSS has garnered broad support from vendors, and analysts say it will lead to increased adoption of Web services.

"[WSS] will become a standard for most Web services," says Ray Wagner, an analyst at Gartner Inc. "I have suggested that organizations developing strategic Web services begin using [the standard] even if they have no current security requirements. This will set the stage for easily adding security as the profile of the service changes."

Raphael Holder, vice president of shared services operations at Northrop Grumman, says his company is tracking the standard.

— Bob Violino

BY RUSSELL KAY

IN A WORLD of interconnected networks and Web services, computing workloads are increasingly being split among clients and servers that are far apart in both distance and functionality. This means it's essential for computers to be able to talk to one another and use data generated by another machine as input. This isn't a new situation; in fact, it's the logical extension of how applications have been developed for years.

In their attempts to achieve greater interoperability and efficiency, developers have created subroutines and procedure calls, object-oriented programming and libraries of reusable software. If you can avoid it, developers rarely create applications from scratch. Instead, they try to take advantage of existing hardware infrastructure, tools and software, as well as previously created software components, all to rein in the time and cost of development and deployment. While these approaches go by many different names, we'll refer to them as "component software." Indeed, one can think of Web services as just a more widely distributed form of component software.

Because Windows has become the primary desktop operating system, and because Microsoft Corp. has tried to extend that monopoly to the server world, it's hardly surprising that the company has for years offered its own set of products and standards for component software. Among the oldest of these, and thus the most widely used and best-known, is the Component Object Model (COM) and its network-savvy offspring, distributed COM, or DCOM.

COM's Binary Essence

The real value of component software for developers was that it allowed them to use binary (i.e., machine-code) modules, not source-code libraries, as was the case with most development environments. COM defined an application

COM

DEFINITION

Component Object Model (COM) is a Microsoft-developed, language-independent architecture created in the 1990s that lets developers build applications from reusable, binary software components.

programming interface that allowed diverse components to interact. As long as components used a Microsoft-specified binary structure, they could be written in different languages and still interoperate after they had been compiled. COM enabled the development of application services using component documents, custom controls, interapplication scripting, data transfer and other types of software interactions.

What's in a Name?

The history of Microsoft component software is complex because the company tends to change its approach and structure every few years, renaming and rebranding technologies. Here's a quick rundown on how component software has changed over the years:

We begin with a technology for compound documents called Object Linking and Embedding (OLE), which was built on top of Dynamic Data Exchange and Visual Basic Extension (VBE) controls from Visual Basic 1.0. (The abundance of acronyms is an unfortunate byproduct of this subject.)

In 1992, Microsoft introduced Windows 3.1, and OLE came with it onto every desktop. This was followed the next year by OLE 2, and in 1994, OLE controls were im-

plemented mainly in Microsoft Office. COM was first implemented in Windows 95.

In 1996, as networking and networkable applications grew in importance, Microsoft announced its DCOM alternative to the Common Object Request Broker Architecture, or CORBA. DCOM first appeared in Windows NT 4.0 with tools to help build client/server applications that spanned both the corporate network and the Internet. In September 1997, Microsoft once again changed the name of its entire component framework — to COM.

A couple of years later, when it introduced Windows 2000, Microsoft renamed COM to DCOM, signifying substantial changes. COM's main attraction was that it could run in component farms managed by Microsoft Transaction Server. A properly made component could be reused by making new calls to its initializing routine without having to unload it from memory. Components could also be called from another machine, which was previously possible only with DCOM, so Microsoft pretty much dropped DCOM as an

independent concept.

But not even COM+ had much longevity. Microsoft soon launched its .Net initiative, a hasty (and often hazy) framework that almost entirely replaced the COM technology. There is limited backward compatibility — .Net can use a COM object by implementing what's called a "wrapper" — but Microsoft made it clear that for new systems, COM was to be dropped entirely in favor of .Net.

.Net includes "smart" client application software and operating systems, smart devices, Web services that can be combined with other Web services or used directly with other client applications, a server infrastructure and an environment (Visual Studio .Net) that directly supports a number of development languages through .Net's Common Language Runtime.

Recent Changes

Despite their disappearance in favor of .Net, the technologies of COM and DCOM are still alive and well, even at Microsoft. In the forthcoming Service Pack 2 for Windows XP, for example, Microsoft will implement two big changes to DCOM. It introduces computer-wide restrictions that provide an additional access check against an access-control list each time a COM server is activated, called or launched. SP2 also introduces more granular COM permissions, giving administrators greater flexibility in controlling a computer's permission policy. 

Key is a Computerworld contributing writer in Worcester, Mass. Contact him or ruskay@charter.net.

CONNECTIONS

For more about how COM interfaces work, visit www.computerworld.com.

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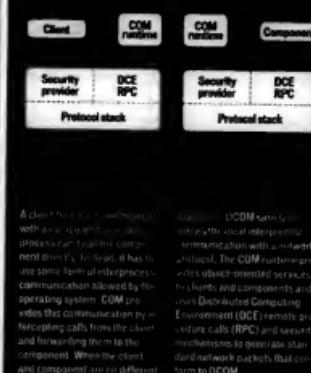
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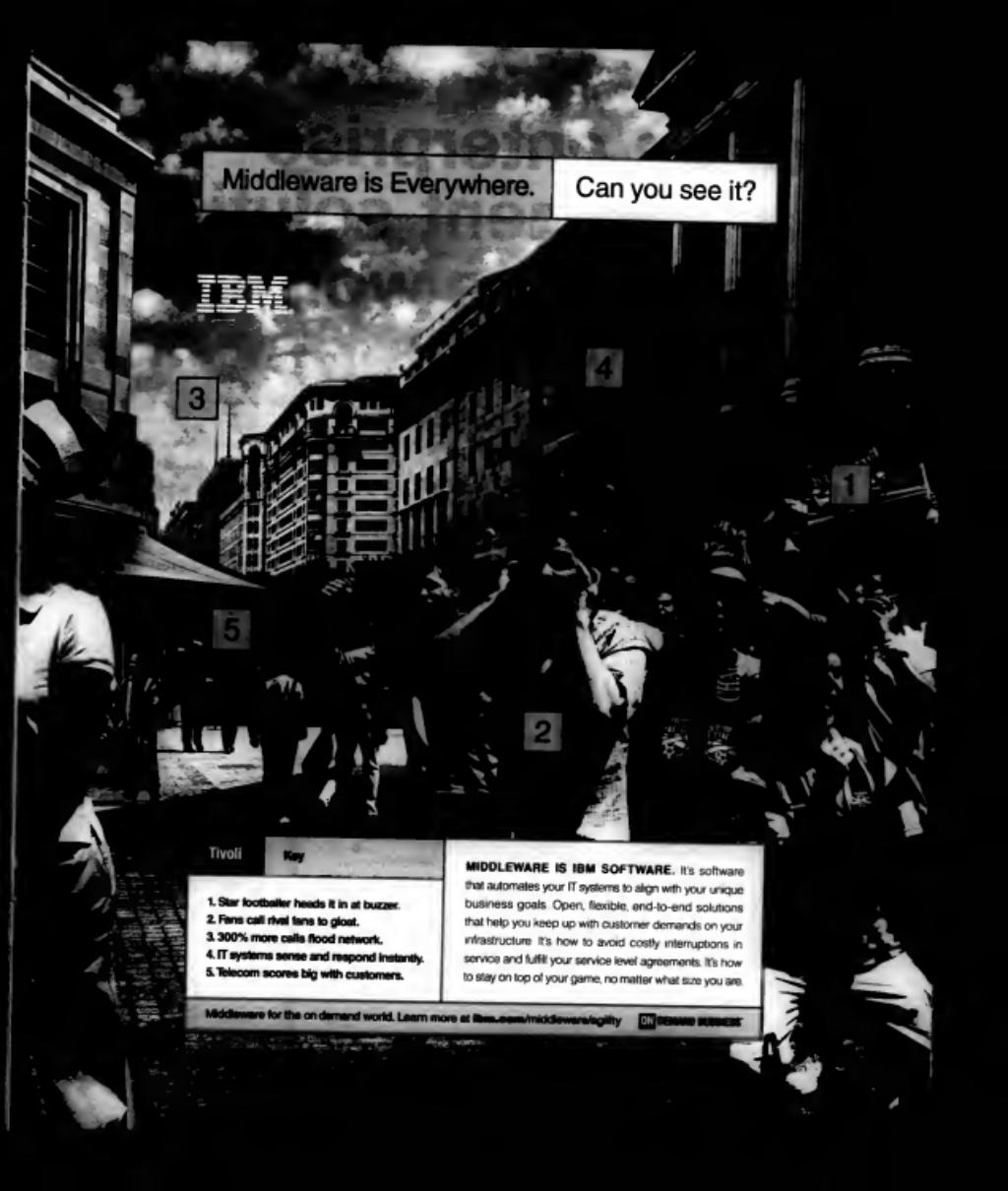
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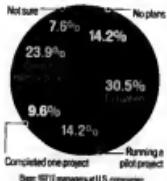


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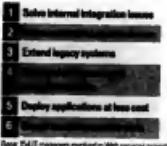
Web Services Adoption

What's your organization's current status on the adoption of a Web services architecture?



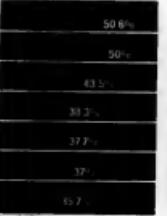
Primary Drivers

The top six reasons for implementing Web services:



Top Headaches

The challenges of adopting Web services:



SOURCE: IDG FRANKFURT, MAJOR, NY, 2004

MARK HALL

Blurry Web Services

IN THE SUMMER BLOCKBUSTER *Spider-Man 2*, the director signals to the audience that Peter Parker (a.k.a. Spider-Man) has or doesn't have his superhero powers based on the character's ability to see with his eyeglasses. When a powerless Peter Parker looks through them, his vision is clear. When his alter ego, the newly recharged Spider-Man, puts them on, his vision is cloudy.

XML proponents claim that developers of Web services applications are as powerful at exchanging information between systems as Spider-Man is at swinging from skyscraper to skyscraper. But increasingly, these developers must feel like Spider-Man wearing Peter Parker's glasses. Their XML world becomes so gummed up with opaque information that XML just can't handle it.

These difficult bits of data, called opaque data, are binary attachments that XML can't tag effectively. These obstinate files include things like digital signatures and compressed multimedia data, such as MPEG files, and are likely to become a bigger problem for developers in our media-rich, security-conscious Web services application world.

This file-attachment problem is the latest to let the air out of the XML hype balloon that preceded its arrival in the late 1990s. Larger file sizes and vertical-market specifications added performance and compatibility problems for XML users. Still, the hype hasn't died down. Today, vendors tout their products' ability to output data in XML formats as if that's all you need to exchange information between programs. They give product buyers a false sense that interoperability issues in the Web services world have evaporated with XML's arrival. That's just not true.

As a general definition for how information can be structured, XML is a giant step forward. But it's not as simple as most vendors would have you and your bosses believe. They want executives to feel warm and fuzzy when they hear that their software uses XML. They want them to think that their products will be compatible with everything already running in your IT shop. Integration, they imply, will be a snap for developers to implement. Return on investment, they suggest, happens almost as soon as you unwrap the software's CDs or download the files. Given the hype, executives might conclude that any integration problems might just be your fault, not the vendors'.

XML's cross-application compatibility hit its first stumbling block in situations where bandwidth was an issue. According to James Kobielus, an analyst at Burton Group, "XML can be a bad thing when you're

trying to secure or speed the flow of traffic." It bloats data transmissions by having to send 10 times as many bits as a non-XML data transfer.

"To get the transparency offered by XML," he says, "you have to sacrifice greater performance."

Then the little vertical problem cropped up, as each industry developed more-precise tagging instructions to achieve more-complete communications among Web services running throughout the supply chain. The chemical industry developed a version of XML, the retail industry created a different one and so on. XML variants spread quickly, and users now have to learn when and where to apply filters to distinguish which ones apply to their markets.

Now vendors are adding up to the problem of opaque data in Web services development. The good news is that there's a serious effort to standardize the way XML works with opaque data. The bad news is that there are five different approaches under consideration, each with its own strengths and weaknesses. Eventually, I suspect, vendors will resolve the problem, either by agreeing to a single standard or by supplying XML parsers that can handle all the existing standards.

XML's strength is its ubiquity. And that's great, unless the most important issue for your application is performance, or you have a complex, multiple-industry supply chain, or your application's usefulness depends on opaque data. Then XML's pervasiveness won't solve your problem. It may help, but it won't eliminate one of the oldest problems in IT: software interoperability.

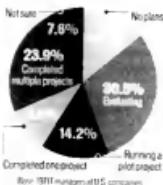
The promise of Web services is that it will remove most of the stumbling blocks that exist between vendors' software. Yet the most basic building block of Web services, XML, continues to trip up vendors and users.

That's not to say that XML hasn't helped bridge many gaps among products on the market today. Nor does it obviate Web services' promise to vastly improve vendor software interoperability. But the new power these tools put at your fingertips doesn't eliminate your application integration problems. You still need to do your developer superhero outfit and fight those battles one villain at a time. © 48222



Web Services Adoption

What's your organization's current status on the adoption of a Web services architecture?



Primary Drivers

The top five reasons for implementing Web services

- 1 Solve internal integration issues
- 2 Solve external integration issues
- 3 Extend legacy systems
- 4 Reduce development and maintenance time
- 5 Deploy applications at less cost
- 6 Create reusable modular code

Based: 1541 IT managers in U.S. companies

Top Headaches

The challenges of adopting Web services

Challenge	Percentage
Security	50.6%
Pending	50%
Inability of re-engineering existing apps	43.5%
Size of existing legacy software systems	38.3%
Amount of integration needed	37.7%
Providing data with IT solutions	37%
Reliability of software	35.7%

Based: 1541 IT managers in U.S. companies

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trying to secure or speed the flow of traffic." It bloats data transmissions by having to send 80 times as many bits as a non-XML data transfer.

"To get the transparency offered by XML," he says, "you have to sacrifice greater performance."

Then the little vertical problems cropped up, as each industry developed more specific tagging instructions to assure more complete communications among Web services running throughout the supply chain. The chemical industry developed a version of XML, the re-tail industry created a different one and so on. XML variants spread quickly, and users now have to learn when and where to apply filters to distinguish which ones to apply to their markets.

Now vendors are facing up to the problem of opaque data in Web services development. The good news is that there's a serious effort to standardize the way XML works with opaque data. The bad news is that there are five different approaches under consideration, each with its own strengths and weaknesses. Eventually, I suspect, vendors will resolve the problem, either by agreeing to a single standard or by supplying XML parsers that can handle all the existing standards.

XML's strength is its ubiquity. And that's great, unless the most important issue for your application is performance or you have a complex, multi-industry supply chain or your application's usefulness depends on opaque data. Then XML's persistence won't solve your problem. It may help, but it won't eliminate one of the oldest problems in IT: software interoperability.

The promise of Web services is that it will remove most of the stumbling blocks that exist between vendor software. Yet the most basic building block of Web services, XML, continues to trip up vendors and users.

That's not to say that XML hasn't helped bridge many gaps among products on the market today. Nor does it obviate Web services promise to vastly improve vendor software interoperability. But the new power these tools put at your fingertips doesn't eliminate your application integration problems. You still need to don your developer superhero outfit and fight those battles one villain at a time. **© 48222**



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Lite a Fire

IT'S OFFICIAL: You're now paying much more for Microsoft Windows than some of your potential competitors. Last week, Microsoft confirmed that starting in October, it will offer Windows XP Starter Edition, a cheaper, scaled-down XP, to PC customers in Malaysia, Indonesia and Thailand, with two other not-yet-named countries soon to join that list [QuickLink 48757].

How much cheaper? Microsoft won't say yet, but published reports quote retail prices of \$40 for a still-very-functional version of Windows XP. The version you're using retails at \$499.

Are you getting hosed? Maybe so. But it is the right thing for Microsoft to do. And you should be glad it's happening.

According to Microsoft, this "XP Lite" is both more affordable, and easier to use and support than regular XP. It won't handle multiple user logins, PC-to-PC home networking, printer sharing or having unlimited windows open at once. It will support Web-browsing and security. Sound like something you could use? You can't have it. Why? Because you're willing to pay for full-blown XP, that's why.

Look. Microsoft has said for years that it wouldn't offer a Windows Lite. It's doing so now only because people in some markets simply aren't buying Windows XP. With the threat that Linux could start displacing Windows in those markets, Microsoft had to do something radical. Will it work? It may, though there's no guarantee. As member, XP Lite isn't something Microsoft's customers demanded. Microsoft's customers were already buying XP. XP Lite was created because of people who weren't Microsoft's customers. By refusing to buy, they forced Microsoft's hand.

And Microsoft wisely did what the market wanted — even though those could-be customers still merrily go for XP. Lite is gamble that might not pay off. But, for Microsoft, it's worth a shot.

What does that mean for the rest of half a world away? Well, if you move against companies in Malaysia, Indonesia or Thailand, it will chase competitors just got an edge over you: a cheaper, simpler version of Windows XP. It may not be escape, but in a global market, every little bit matters. The upside is that Microsoft is

able, trimming down a product to what users need. After two decades of bloating Windows and insisting that one size fits everyone, Microsoft is finally acknowledging that not all users require all that expensive complexity.

And that's cause for optimism, even if it's based on something that exists only on the other side of the globe. After all, if Microsoft de-bloated its software for them, why not for us?

You already know the answer to that question: XP Lite happened only because Microsoft was forced into it by people who wouldn't buy the existing product.

And as long as you're still willing to buy what Microsoft is selling, that's what you'll get.

So if you want products like XP Lite — tighter, less expensive, and easier to train for, use and maintain — you'll have to demand them. And you'll have to back up that demand by refusing to buy software that isn't what you want.

That may mean putting off that next round of upgrades. Or using open-source software. Or getting products from vendors so desperate for sales that they'll deliver what customers need.

Or building smaller, more targeted applications yourself. It won't be easy, and it could get ugly.

But we've been lamenting bloatware for years. Now, finally, we're seeing the first moves toward clearer, more affordable Microsoft software. It may not offer much hype, but it's worth a shot.

After all, people in Malaysia, Indonesia and Thailand got Microsoft to listen to what they need. Who knows? If we work hard enough at it, maybe Microsoft will listen to us, too. **48783**



PHOTO BY: ERIC
Computerworld's senior editor, Eric Kehler, has covered IT for more than 20 years. Contact him at ekehler@computerworld.com.

Unclear on the Concept

This user wants the latest upgrade he's read about, and he wants it now! Help desk pilot fish explains that it's a maintenance-only release, that it won't improve his performance, that the upgrade is already on the schedule — but the user hollers that he's got to have it or he'll have fish's head. The help desk prioritizes problems from 1 — most urgent — to 4, so fish asks, "What priority do you want this in?" The case runs from 1 (all the way up to a 4). Denote a 4! User demands. Says fish, "That's what he got."

Help!

Help desk supervisor is joking with a newly hired IT pilot fish about how many users are lacking in basic knowledge about the software they use. "So many questions about Microsoft's operating systems and applications can be solved with a press of the F1 key," fish comments — to which the supervisor replies, "What does the F1 key do?"

Emergency, Redefined

This server installation is an emergency, pilot fish is told, so he flies 1,000 miles overnight to get it set up Monday morning. "I found the server and associated software with no problem, then asked where the server was to be located and where the Token Ring lines would go," fish reports. "My contact pointed to a blank wall and said, 'They'll be installed there in about two months — when the union electrician put the office on their schedule.'"

In a Word, Yes
Systems analyst asks support pilot fish to make a configuration

change on her PC but tells fish she's about to leave for lunch. "I explain that I will remotely control her PC to make the change," fish says. Her response? "She says it will still be able to see the screen if she turns off the monitor."

Time for a More Formal Password Policy, Maybe?

User to support pilot fish: "What's your T-shirt say yesterday?" Pilot fish: "Why?" User: "Because that was my password, and I've forgotten it."

Probably Not

Business student asks IT instructor why fiber-optic networking cable isn't used everywhere. "It because glass is so breakable?" he asks. No, fiber is quite flexible, fish says. Would you like to see a sample? "That's OK," student says confidently. "I have a fiber-optic Christmas tree." When fish brings in a sample of fiber cable, student is puzzled.

"That's not what my Christmas tree looks like," he tells fish. "I must have a crystal Christmas tree."



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